

CIVILOHOLIC

BY DEPARTMENT OF CIVIL ENGINEERING

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Earthquakes don't kill people,
buildings do.

DR. B. C. ROY ENGINEERING COLLEGE

Approved by AICTE An Autonomous Institution Affiliated to MAKAUT, West Bengal

DURGAPUR



EDITOR MESSAGE'S



Dear Readers,

It is with great joy and pride that we present to you the fifth edition of our departmental E-magazine, CIVILOHOLIC. This platform has consistently aimed to reflect the innovative spirit and creative potential of both our students, faculty and staff members. With every edition, we strive to bring forth fresh perspectives and ideas that contribute to the intellectual growth of our academic community.

This magazine serves as a launchpad for the creative and intellectual expressions of students. Much like a parachute functions best when opened, the mind too must be free and expansive to explore its full potential. Through this initiative, we aim to unlock the imagination of our budding engineers and allow them to explore beyond the conventional boundaries of academics. The dedication shown by our students and guidance from experienced faculty and staff have resulted in a vibrant and engaging collection of content.

From technical articles to poetry, stories, photographs, drawings, and non-technical pieces, this edition encapsulates a rich blend of knowledge and creativity. We firmly believe that innovation is born out of observation, exploration, and curiosity. The consistent hard work, creativity, and perseverance of our contributors are what breathe life into this magazine and make it appealing to readers of all backgrounds.

The journey of editing and compiling this magazine has been both challenging and rewarding. This effort could not have been realized without the invaluable support of Prof. Koyndrik Bhattacharjee, Prof. Anupam Kumar Biswas, and the enthusiastic contributions of another editorial team member Udit Sarkar. His dedication and belief in nurturing talent have been instrumental.

Special thanks go to Dr. Sanjay Sengupta, Head of the Civil Engineering Department, for entrusting me with the responsibility of editing this issue. I also wish to acknowledge the guidance and encouragement of Dr. Sanjay S. Pawar (Principal, BCREC) and Dr. K. M. Hossain (Vice-Principal, BCREC), whose support has been vital.

It is my sincere hope that this edition of CIVILOHOLIC inspires its readers, stimulates critical thinking, and continues to receive your appreciation and encouragement in the future.

SAHABUDDIN SEKH

Chief Editor, CIVILOHOLIC

3rd Year, Department of Civil Engineering

DR. B.C. ROY ENGINEERING COLLEGE, DURGAPUR

HOD'S MESSAGE'S



Warm greetings from the Department of Civil Engineering, Dr. B.C. Roy Engineering College, Durgapur.

It is with immense pride and satisfaction that I present to you the fifth edition of our departmental e-Magazine CIVILOHOLIC. Since its inception in 2021, the magazine has served as a platform to showcase the innovation, technical expertise, and creativity of our students, faculty and staff members. With each edition, we have seen significant improvement in content, depth, and impact, and I am confident that this volume will raise the bar even higher.

This publication is the result of tireless efforts by our student editorial board, faculty mentors, and all contributors whose dedication and teamwork made this endeavor possible. My heartfelt appreciation goes out to everyone who supported and participated in this journey. Beyond academics, the department remains actively engaged in enriching the student experience through cultural and professional initiatives. This academic year, we proudly organized events such as AGOMONI 2024, Teacher's Day 2024, and the Farewell Program of Final Year Students, all of which fostered a sense of unity and celebration among students, faculty and staff members.

On the industry collaboration front, a significant milestone was achieved through the Memorandum of Understanding (MoU) signed between our department and Ultratech Cement, which will open up opportunities for industrial training, knowledge sharing, and practical exposure.

In terms of student development, we are proud to highlight that 20 third-year students were offered paid internships under the National Highways Authority of India (NHAI), giving them valuable hands-on experience in core civil engineering domains. Additionally, the department successfully organized a workshop on Building Information Modeling (BIM) and Revit, which saw enthusiastic participation from students, faculties, and staffs—not only from our college but also from other institutions, making it a truly collaborative and enriching learning experience.

One of our most significant achievements this year is the outstanding placement scenario. More than 50% of final year students have secured jobs in reputed companies, with many of them bagging lucrative offers. Notably, placements include Godrej and Boyce (₹7.75 LPA), Skipper Limited (₹5.50 LPA), Megha Engineering and Infrastructures Ltd. (₹3 LPA), and Duttcon Consultant and Engineers Pvt. Ltd. (₹2.49 LPA). These results reflect the hard work of our students, the consistent mentoring by faculties and staffs and the department's emphasis on industry-aligned training.

As we move forward, our department remains committed to fostering academic excellence, professional growth, and holistic development of every student. We aim to continue creating a vibrant ecosystem where creativity and technical competence flourish hand in hand. I extend my best wishes to all readers and contributors of this magazine and hope it will continue to inspire innovation and excellence across the Civil Engineering community.

DR. SANJAY SENGUPTA

PROFESSOR & HOD
CE. BCRC

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MEET THE EDITORIAL TEAM



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VISION

To transform the department into a global center of learning through synergic application of understanding, creativity, innovation and discipline.



OVERVIEW

The department of Civil Engineering was established in the year 2010 and the first batch graduated in the year 2014. The department has highly qualified faculty members who are dedicated for quality education to students. The laboratories of the department are well equipped for undergraduate level of studies. A project lab is being established looking at the recent needs in Civil Engineering where students will be able to do hands on project. Since its inception the department has produced quality students who are presently doing well in their professional life in different areas of Core Civil Engineering, Software Engineering, Government Services and different other allied sectors. Department encourages students to pursue higher studies in different areas of Civil Engineering after qualifying GATE examination, MBA and studying abroad. Department has MoU with NHA where paid internship opportunities are available. Department has well connected established relationship with various other companies and Government organizations where internship/ industrial training opportunities are created for the students. Department organises regular site visit / industrial visit for students to provide the students with the feel of practical & industry exposure from second year onwards. There are established student chapters in the department where the students are encouraged to become member and showcase their technical and managerial skill through organising different events. Since its inception the department is trying its best to improve the quality of education such that the students get the best kind of placement opportunities.



**SCAN & SEE OUR
DEPARTMENTAL VIDEO**



MISSION

To provide a great platform for learning by offering a variety of subject choices covering broad frontier areas of civil engineering. To inculcate in students a commitment to ethical and sustainable engineering practices, social responsibility and foster leadership qualities. To collaborate with industry and academia for achieving excellence in research, consultancy and entrepreneurship developments. To develop and maintain quality education through active collaboration with all stakeholders, including students, teachers, industry, alumni, and renowned academic and research institutions.



LABORATORIES

- ④ SOLID MECHANICS LAB
- ④ SURVEYING AND GEOMETRICS LAB
- ④ FLUID MECHANICS LAB
- ④ ENGINEERING GEOLOGY LAB
- ④ SOIL MECHANICS LAB
- ④ CONCRETE TECHNOLOGY LAB
- ④ COMPUTER AIDED DRAWING LAB
- ④ WATER RESOURCE ENGINEERING LAB
- ④ ENVIRONMENTAL ENGINEERING LAB
- ④ MATERIAL TESTING LAB
- ④ HIGHWAY & TRANSPORTATION ENGG. LAB.
- ④ PROJECT LABORATORY

CIVILOHOLIC

DEPARTMENT OF CIVIL ENGINEERING

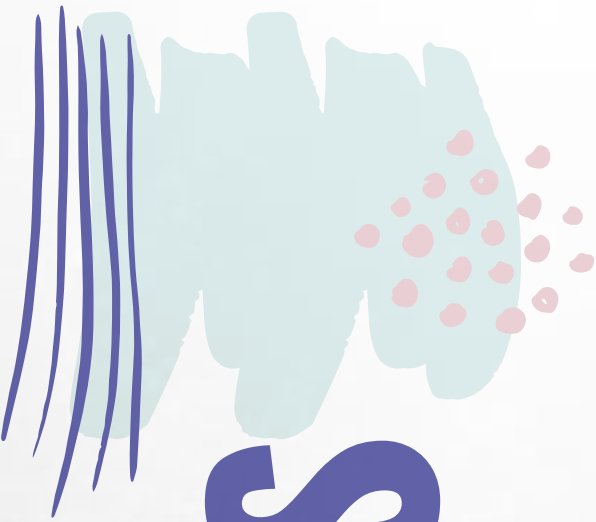


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TECHNICAL ARTICLES



Unveiling Kolkata's Subaqueous Marvel: The First Under-River Metro

In the bustling metropolis of Kolkata, where every street narrates a tale of history and progress, a new chapter has been written in the annals of transportation infrastructure. Kolkata's first under-river metro, a testament to engineering ingenuity and urban advancement, emerges as a beacon of modernity amidst the city's rich cultural tapestry. This groundbreaking project represents not only a triumph in transportation technology but also a catalyst for socio-economic development in the region.

The East West Metro Tunnel, located in Kolkata, West Bengal, is an underwater river tunnel constructed beneath the Hooghly River for the Kolkata Metro. It holds the distinction of being India's largest underwater river tunnel designed for metro rail service. Spanning a length of 10.8 kilometres (6.7 miles) and boasting a width of 5.5 meters (18 feet 1 inch), the tunnel includes a 520-meter (1,706 feet) stretch passing beneath the Hooghly River. Positioned approximately 30 meters (98 feet 5 inches) below ground level, the tunnel was successfully completed in 2021. Operated by the Kolkata Metro Rail Corporation, the East West Metro Line utilizes this tunnel for its metro rail services, with construction undertaken by Afcons Infrastructure.



As per the historical backup, It was more than 100 years ago in 1921 that a British engineer Sir

Harley Dalrymple-Hay had for the first time proposed that the East and West sides of Kolkata should be connected through an underwater metro. However, the ambitious project did not see the light of day as the railways considered it too costly and difficult to handle given the alluvial soil that made up the Gangetic bed and pushed it into the background. However, Dalrymple-Hay was assigned by the Calcutta Electric Supply Corporation to build a smaller tunnel linking the two cities for electric cables. This tunnel, the first of its kind in India, was done by hand without any boring machines and completed in 1931.

Though the Howrah Bridge over the Hooghly River provided the desired connectivity when it became operational in 1946, the huge flow of traffic in the later years kept city planners on their toes for alternate connectivity routes.

In 1971, Kolkata's master plan once again emphasized the need for such a project but both the state as well as the Centre were hesitant as they lacked the confidence to go in for such a mammoth exercise. Project experts say that technological advancement in Russia and many European countries made it possible to have under-river tunnels for inter-city connectivity and this gave a cue to Indian engineers to deploy a similar technology here for an under-river project.

After years of delay and deliberations, when the Indian Railways, in 2010, handed over the contract for this project to the construction firm AIL through international bidding.

The first phase of the construction was the very challenging to plan and design the whole project for the first time; first of all the soil under the river and also the city is alluvial, clayey and muddy. So, The project experts had to carry out extensive geotechnical studies and hydrographic surveys to identify aquifers and understand the ever-changing soil parameters.

The planning phase of the project involved extensive feasibility studies and route assessments. Engineers evaluated various factors such as geological conditions, hydrology, and environmental impact to determine the most



suitable path for the tunnel. Advanced modelling and simulation techniques were employed to forecast potential challenges and devise mitigation strategies.

After a long research, innovations and collaborated with Russian, South African and European engineers, finally the construction started on march 2016 from Howrah Maidan. The section between Howrah Maidan metro station and Esplanade metro station has been built by Afcons – Transtunnelstroy JV team, two customized tunnel boring machines from Herrenknecht, Germany are being used to dig the tunnel, which have some particular specification to meet the project's need.



Tunnelling started from Howrah Maidan side. On 23 May one of the TBM named Rachna completed the tunnelling under the Hooghly River in 36 days. The other TBM named Prerna also completed the tunnelling work under the river on 21 June 2017. There were some concerns during tunnelling under Brabourne Road as the tunnel would pass within 100 metres (328 ft 1 in) of heritage structures and there were also many old and dilapidated buildings in this section. KMRC received permission from Archaeological Survey of India in June 2017. Residents and shops in the old building were temporarily shifted and the buildings were reinforced before construction of tunnel. Under may 2018, 5490 meters of tunnel have been constructed between Subhash Sarovar and Sealdah. This section was constructed by ITD-ITD Cementation JV. All the cross passes between the two tunnels have also been completed. Track laying is being carried out in this section. The tunnelling work was stopped due to collapse of building on 3 September 2019 over the Bowbazar area due to TBM hitting an aquifer. The work resumed in June, 2020 and successfully completed the affected area.

Working cautiously, coupled with some more subsidence, all tunnelling works, retrieval of the two TBMs and closure of all shafts were completed in April 2023.

The wheels of railways rolled for the first time below the Hooghly river when, both trains arrived at Howrah Maidan station on 13 April 2023 and the trial of trains started. Later, Kolkata Metro added blue light in the underwater tunnel section to give passengers a sense of feeling under Hooghly River.

The Esplanade-Howrah Maidan section of the Line 2 was inaugurated on 6 March 2024 by Prime Minister Narendra Modi, along with the truncated sections of Taratala-Majerhat under Line 3 and Kavi Subhash-Hemanta Mukhopadhyay under Line 6.



As the work done, the national & regional media claimed this project as a big milestone terming India's first under water and "underwater river" metro tunnel, but it's not true. While the Hooghly River is very wide and requires tons of engineering challenges in constructing tunnels, there are other metro lines built in India cities which get the discussed titles, including Kolkata metro's operational Line-1 as the first one:

- Kolkata Metro Line 1: Under the Circular Canal falling between the Shyambazar and Belgachia metro stations. (built in 1990s) Today, East-West Metro also passes under this canal between Phoolbagan and Sealdah metro stations.
- Delhi Metro Line 2: Under the Najafgarh Drain in northern Delhi (built in 2007) and Kushak Drain in southern Delhi (built in 2009).

- Chennai Metro Line 1: Under the Cooum River in central Chennai while passing from the Government Estate to Chennai Central metro station (built in 2015-17).

Railway experts say that the experience along with technical expertise will now come in handy for the upcoming first 7-km long undersea rail tunnel at Thane Creek in Maharashtra for the Mumbai-Ahmedabad bullet train project. This will be part of a total 21-km long underground tunnel between the Bandra-Kurla complex to Shilphata.



Anirban Kar

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DEPARTMENT OF CIVIL ENGINEERING

SELF-HEALING ROADS: A REVOLUTIONARY SOLUTION TO POTHOLES

Introduction

Potholes have long plagued road infrastructure worldwide, causing vehicle damage, traffic congestion, and safety hazards. Traditional road maintenance methods are costly, time-consuming, and often short-lived. However, advances in materials science have introduced an innovative concept—self-healing roads. These roads can automatically repair cracks and minor damage, significantly reducing the need for manual repairs and extending the lifespan of road surfaces.



❖ The Science Behind Self-Healing Roads

Self-healing roads rely on smart materials that can autonomously repair damage when triggered by specific environmental conditions. The three most prominent technologies include:

- **Bitumen with Microcapsules:** Engineers have developed asphalt containing tiny capsules filled with rejuvenating agents. When cracks form, these capsules break open, releasing their contents and sealing the cracks before they expand into potholes.
- **Bacteria-Based Concrete:** Certain strains of bacteria, such as *Bacillus* species, can be embedded into road materials. When cracks appear and moisture enters, these bacteria activate and produce limestone, filling the cracks naturally.
- **Induction Heating Technology:** Steel fibers embedded in asphalt can be heated using electromagnetic induction. This softens the bitumen, allowing small cracks to close and merge, effectively repairing the damage.



❖ Environmental and Economic Benefits

The implementation of self-healing roads offers several environmental and economic advantages:

- **Reduced Maintenance Costs:** With the ability to repair themselves, roads require fewer costly repairs, saving governments and municipalities millions annually.
- **Extended Road Lifespan:** Traditional roads deteriorate over time due to weather conditions and traffic load. Self-healing materials can significantly prolong the durability of road infrastructure.
- **Lower Carbon Footprint:** Frequent road repairs contribute to CO₂ emissions through the production and transportation of new materials. Self-healing roads minimize the need for these activities, promoting sustainability.
- **Enhanced Safety:** Potholes and cracks pose risks to motorists and pedestrians. Roads that can heal themselves improve road safety and reduce accident rates.



❖ Challenges and Implementation

While self-healing roads present a promising future, several challenges must be addressed before widespread adoption:

- **Initial Costs:** The development and integration of self-healing materials into road construction are initially more expensive than conventional methods.
- **Regulatory Approval:** Governments and road authorities need to update infrastructure standards and conduct extensive testing to ensure these materials meet safety and durability requirements.
- **Scalability:** Further research is necessary to optimize these technologies for large-scale implementation on highways and urban streets.



❖ Real-World Applications and Future Prospects

Several countries have already begun experimenting with self-healing roads. The Netherlands, for example, has tested induction-heating asphalt on highways, proving its potential for long-term use. Researchers in the UK and the US are also exploring bacteria-based concrete solutions for road and bridge repair. As research progresses, the cost of these technologies is expected to decrease, paving the way for more widespread adoption.



Conclusion

Self-healing roads represent a transformative innovation in civil engineering, promising to reduce maintenance costs, improve road safety, and minimize environmental impact. While challenges remain, continued research and investment in this technology can revolutionize transportation infrastructure worldwide. With advancements in materials science and increased governmental support, self-healing roads may soon become a standard feature in modern infrastructure, ensuring smoother, safer, and more sustainable roadways for future generations.



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DEPARTMENT OF CIVIL ENGINEERING

REVOLUTIONARY CEMENT-FREE CONCRETE: A GAME CHANGER FOR SUSTAINABLE CONSTRUCTION

Introduction

The global construction industry is undergoing a transformative shift as engineers and material scientists develop revolutionary alternatives to traditional Portland cement. Cement, a primary component of concrete, is responsible for nearly 8% of global CO₂ emissions due to its energy-intensive production process. However, recent advancements have led to the development of cement-free concrete, a groundbreaking innovation that could redefine sustainable construction.



❖ The Problem with Traditional Cement

Portland cement has been the backbone of the construction industry for over a century. Its production involves the calcination of limestone at high temperatures, a process that releases significant amounts of carbon dioxide. The environmental cost of cement production, coupled with the depletion of natural resources, has driven researchers to seek alternative solutions that maintain concrete's durability while reducing its carbon footprint. Additionally, the extraction of raw materials such as limestone and clay contributes to habitat destruction and resource scarcity.

❖ Cement-Free Concrete: The Science Behind It

Cement-free concrete replaces traditional Portland cement with alternative binders such as industrial by-products, geopolymers, and carbon-sequestering materials. Leading innovations in this field include:

- **CarbiCrete:** A technology that utilizes steel slag, a by-product of the steel industry, to replace cement. During curing, this concrete absorbs CO₂, effectively making it carbon-negative. Studies show that CarbiCrete achieves comparable strength and durability to traditional concrete while sequestering approximately 150kg of CO₂ per cubic meter.
- **C-Crete Technologies:** A zeolite-based binder that eliminates the need for cement, reducing CO₂ emissions while maintaining high strength and durability. C-Crete has successfully implemented its technology in infrastructure projects, demonstrating enhanced performance in real-world conditions.
- **Alkali-Activated Geopolymers:** These materials use fly ash or slag activated with alkaline solutions, producing a robust concrete alternative without the carbon-intensive cement component. Geopolymer concrete has shown superior resistance to fire, chemicals, and extreme weather conditions, making it ideal for long-lasting infrastructure.



❖ Environmental and Structural Benefits

The advantages of cement-free concrete extend beyond its eco-friendliness. These materials offer enhanced durability, reduced permeability, and improved resistance to chemical attacks. Unlike traditional concrete, which can suffer from issues like shrinkage and cracking, many cement-free alternatives exhibit superior mechanical properties, increasing the longevity of structures. Additionally, by utilizing industrial by-products, this innovation contributes to circular economy principles, minimizing waste and promoting resource efficiency.



❖ Challenges and Barriers to Adoption

Despite its promising benefits, cement-free concrete faces several challenges. The lack of standardized regulations and building codes can hinder widespread adoption, as engineers and contractors may be reluctant to use new materials without established guidelines. Additionally, the initial cost of alternative binders and production methods may be higher than conventional cement-based concrete, although long-term savings in maintenance and environmental benefits could offset these costs. Further research and large-scale pilot projects are crucial to demonstrating the feasibility and economic viability of these sustainable alternatives.

❖ Real-World Applications and Future Prospects

Cement-free concrete is already making strides in real-world applications. From structural slabs to precast elements, companies are successfully deploying this sustainable alternative in construction projects worldwide. For example, infrastructure projects in Europe and North America have utilized geopolymers for bridges and highways, showcasing its resilience and long-term benefits. As research and development continue, regulatory bodies and industry leaders are working towards widespread adoption through updated building codes and standards. Government incentives and policy support can further accelerate the transition to cement-free materials.

The future of construction is undeniably green, and cement-free concrete is at the forefront of this revolution. With continued innovation and investment, this technology has the potential to

become the new standard, significantly reducing the environmental impact of one of the world's most essential industries.



Conclusion

As the demand for sustainable infrastructure grows, cement-free concrete represents a promising solution to one of the construction industry's biggest environmental challenges. By embracing these advancements, engineers, architects, and policymakers can pave the way for a more sustainable and resilient built environment, ensuring a cleaner, greener future for generations to come. The transition to cement-free construction materials will not only benefit the environment but also promote economic growth through the development of new industries focused on sustainable material production and application.



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DEPARTMENT OF CIVIL ENGINEERING

THE ROLE OF AUGMENTED REALITY IN THE CONSTRUCTION INDUSTRY

✧ Introduction

The Architecture, Engineering, and Construction (AEC) sector has been slow to adopt emerging technologies, ranking low on the McKinsey Global Institute Industry Digitization Index. With productivity increasing by only 1% annually over the past two decades, integrating augmented reality (AR) can offer significant improvements. AR has the potential to reduce project costs, increase efficiency, and improve collaboration through real-time visualization and digital overlays.



✧ Leading Augmented reality Apps:

- ✓ **Gamma AR (Gamma Technologies):** Connects BIM models to active construction sites, aiding verification and maintenance. Features include metadata access, annotations, and real-world synchronization. Used by Royal BAM for residential projects.
- ✓ **ARki (Darf Design):** An AR model viewer for placing digital models in real-world contexts, enhancing client presentations. Used by Network Rail for pedestrian bridge designs. Key features include modular expansion, model explosion, and annotation.
- ✓ **Fologram & Twinbuild:** AR visualization tools for construction, with Fologram focused on design prototyping and Twinbuild optimized for precision construction. Used for intricate projects like the Tallinn Biennale pavilion. Supports Rhino, Grasshopper, and Revit.

✧ Applications of AR in Construction

- **BIM Model Superimposition:** AR allows contractors and managers to overlay Building Information Modeling (BIM) data onto real-world construction sites. This enhances planning, quality control, and issue detection, reducing costly rework.
- **Augmented Training and Manuals:** AR-based training enables workers to receive real-time, hands-free guidance, improving safety and efficiency. This minimizes downtime and ensures proper machinery usage without the need for onsite experts.
- **Enhanced Collaboration:** AR enables remote collaboration by allowing field workers to share live video feeds and receive expert input in real-time, reducing the need for travel and improving problem-solving.
- **Underground Construction Visualization:** AR assists in locating underground utilities, reducing risks of accidents such as gas line ruptures, which can have catastrophic consequences.

❖ Benefits of AR Implementation

- ❖ **Reduced Rework and Downtime:** Real-time AR visualization helps identify potential conflicts in construction plans, saving both time and money.
- ❖ **Improved Project Management:** Clients and architects can review AR models before construction begins, ensuring clarity and reducing design misunderstandings.
- ❖ **Cost Savings:** As demonstrated by Gilbane Building Company, AR use in detecting steel frame misalignment saved \$5,000, proving that even a \$3,000 investment in an AR headset can yield positive returns.

❖ Challenges and Considerations

- ✓ **High Initial Costs:** AR technology, particularly headsets like HoloLens, remains expensive, limiting adoption to large enterprises.
- ✓ **Integration Issues:** Many construction firms lack robust IT departments, slowing down the adoption of AR-based solutions.
- ✓ **Environmental Limitations:** AR currently requires relatively static surroundings, which can be challenging on dynamic construction sites.
- ✓ **Safety Concerns:** AR devices need to be integrated with protective gear like hard hats to ensure worker safety.

❖ Future Outlook

Despite challenges, the decreasing cost of AR development tools and increasing industry awareness make it a viable solution for boosting construction efficiency. Small-to-medium enterprises are gradually beginning to harness AR's benefits as open-source mobile toolkits become more accessible.

- ❖ **Conclusion:** AR is poised to revolutionize the construction industry by enhancing efficiency, reducing costs, and improving collaboration. AEC companies must embrace digital transformation to overcome traditional productivity barriers. As AR technology evolves, its integration with construction workflows will become more seamless, fostering a smarter and more efficient industry.

I understand that reading the text above may not appeal to everyone. Instead, feel free to explore the **YouTube Shorts** provided in the link below.

<https://youtu.be/PcwWqeiLtkE?si=vOxySLhPX554o4Xp>

<https://youtube.com/shorts/k9zxdIs7CHQ?si=Rx59HCzzmLmmAYNU>

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NON - TECHNICAL ARTICLES





ধর্মই কি পরিচয়ের মানেদণ্ড?



মানস সাহা
("চতুর্থ বর্ষ")

‘আমার কলম কোনো মন্দিরের দেয়াল আঁকবে না, কোনো মসজিদের মিনারও গড়ে না। আমি কোনো বিশেষ ধর্মের পক্ষ লিখি না, লিখতে পারি না- কারণ প্রত্যেক ধর্মের শিকড় যে বরুণা, যে ভালোবাসা, যে সহিষ্ণুতা নিহিত আছে, তাকে অসম্মান করার অধিকার আমার নেই। কিন্তু যখন ধর্ম প্রাণ রক্ষা করতে শেখায়, আবার সে ধর্মের ছমাসম দাঁড়িয়ে নির্বিচারে প্রাণ কেড়ে নেয়, তখন কেবল ধর্মকেই কলঙ্কিত করে না, কলঙ্কিত করে সমগ্র মানবজাতিও _____

কাশ্মীরের পেহেলগাঁও-তে সম্প্রতি ঘটে যাওয়া জঙ্গি হামলা আরেকবার ভোখে আঙুল দিয়ে দেখিয়ে দিল-আমরা এখনো যুগের রাজনীতির বনয়ে বন্দি। একটি ভূখণ্ড, একটি জাতি, একটি ধর্ম-এসব বিভাজনের রেখা কেবল মানচিত্রে নয়, মানুষের হৃদয়ে গভীর ক্ষত সৃষ্টি করে। ঘটনাটি হয়তো একদিন ইতিহাসের পাতায় চাপা পড়ে যাবে, কিন্তু তার ছায়া রয়ে যাবে সমাজের গভীরে, বিশ্বাস আর মানবতার মাঝখানে। পেহেলগাঁওর এই রক্তাক্ত বিকল ধর্মের নামে পরিচালিত রাজনীতির নিষ্ঠুরতম বহিঃপ্রকাশ। হামলাকারীরা ধর্মীয় পরিচয় দেখে হত্যা করার মাধেই লুকিয়ে রয়েছে মৌলিক সংকেত-ধর্ম আজ আদর্শ নয়, অস্ত্র। ধর্মের মোড়কে লুকিয়ে থাকা ক্ষমতার রাজনীতি আজ যতটা না ইস্তবের প্রতি বিশ্বাস জন্মায়, তার চেয়ে বেশি জন্ম দেয় বিভেদ, বিদ্বেষ আর মৃত্যুর। পাকিস্তান আজ শুধুমাত্র একটি বিপথগামী রাষ্ট্রের প্রতিচ্ছবি, যেখানে ধর্মের নামে মানুষকে বিভাজিত করা হচ্ছে, যেখানে নাগরিকের অধিকার প্রতিনিয়ত লঙ্ঘিত হচ্ছে, আর সীমান্তে শান্তি প্রতিষ্ঠার বদলে সংঘাতের আগুন জ্বালানো হচ্ছে। একটি রাষ্ট্র যা প্রতি পদে অস্থিতিশীলতা, সন্ধাসবাদ এবং বৈষম্যের বীজ বুনে চলেছে, তার প্রতি কোনোরকম সহানুভূতি বা সমর্থন প্রদর্শন করার কোনো কারণ নেই। তাদের অপমানজনক, একের পর এক শক্রতাপূর্ণ কর্মকাণ্ডের জন্য, আমি পাকিস্তানকে ধিক্কার জানাই। যখন তারা নিজের ভুখণ্ডে সন্ধাসবাদী কার্যক্রমে মত্ত, তখন তাদের থেকে শান্তির আশা কেমন করে করা যায়? পাকিস্তানের এই অস্থিরতা, সংঘাত এবং সন্ধাসী কার্যকলাপ, আমাদের কাছে কোনো মূল্য নেই। আমার দৃঢ় বিশ্বাস-



ভারতীয় জনগণের শান্তি, নিরাপত্তা এবং অগ্রগতি কখনোই পাকিস্তানের সঙ্গে কোনো সম্পর্কের মাধে নিহিত থাকতে পারে না। বরং, আমরা আমাদের সীমান্তে শক্তিশালী ও সুরক্ষিত থাকতে চাই, যেখানে পাকিস্তান কোনভাবেই আমাদের পথের কাঁটা হতে না পারে। নিশ্চিতভাবে! ভারত সরকার পাকিস্তানের সঙ্গে সম্পর্কের বিষয়ে যে সিদ্ধান্ত নিয়েছে, সেটি দেশের নিরাপত্তা ও সার্বভৌমত্বের রক্ষায় একটি গুরুত্বপূর্ণ পদক্ষেপ বলে বিবেচিত হচ্ছে। ভারত সরকার সম্প্রতি পাকিস্তানের সঙ্গে সমস্ত সম্পর্ক খারিজ করার ঘোষণা দিয়েছে, যা একটি কঠোর বার্তা পাঠিয়েছে। এই সিদ্ধান্তের মাধ্যমে পাকিস্তানের প্রতি ভারত সরকারের অসন্তুষ্টি এবং তাদের নিরাপত্তা, সন্ধাসবাদী কার্যক্রম, এবং সীমান্তে উত্তেজনা বৃদ্ধি নিয়ে একটি স্পষ্ট প্রতিক্রিয়া জানানো হয়েছে। ভারত

সরকার এই পদক্ষেপের মাধ্যমে পাকিস্তানের প্রতি পরিশ্কারভাবে তাদের অবস্থান তুলে ধরেছে এটি একটি প্রতিরোধের ইচ্ছিত, যাতে আন্তর্জাতিক অফনে ভারত তার নিরাপত্তা ও সার্বভৌমত্ব রক্ষা করতে সক্ষম হয়। পাকিস্তানের বিরুদ্ধে ভারত সরকারের এই কঠিন সিদ্ধান্ত রাজনৈতিক প্রেক্ষাপটে একটি গুরুত্বপূর্ণ মাইলফলক হতে পারে, যেখানে কূটনৈতিক সমঝোতা ও শান্তির প্রচেষ্টার সাথেও নিরাপত্তা বজায় রাখার প্রয়োজনীয়তা অনুভূত হচ্ছে।

বিগত কয়েক দশক ধরে ক্রমাগত যে মৌলবাদী রাজনীতি কাশ্মীরের সামাজিক কাঠামোকে ভেঙে দিয়েছে, তার প্রতিফলন আজকের এই হামলা। আজকের দিনে কাশ্মীর শুধুমাত্র বলুকের নয়, মননের যুদ্ধক্ষেত্র। এই যুদ্ধে পরাজিত হচ্ছে সংলাপ, সহিষ্ণুতা, মানবতা। বিজয়ী হচ্ছে মৌলিক ভয়। আর ভয়ের মাটি সবচেয়ে উর্বর হয় ধর্মীয় মেরুকরণের বীজবপনে। কোনো সমাজ যখন ধর্মীয় পরিচয়ে মানুষের জীবন-মৃত্যুর সিদ্ধান্ত নিয়ে ফেলে, তখন সেই সমাজ তার সভ্যতার দাবি হারিয়ে ফেলে। পেহেলগাঁওর ঘটনাটি এই সভ্যতার পরাজয়ের প্রামাণ্য দলিল। এখানে প্রশ্ন শুধু কে মারা গেল নয়, বরং কেন মারা গেল। উত্তরটা স্পষ্ট। এমনকি ঘৃণা জাগানো হয়েছিল ধর্মের নাম ব্যবহার করে, রাজনৈতিক উদ্দেশ্যে, অবচেতনভাবে। আজকের ভারতে ধর্ম যতটা না আধ্যাত্মিকতার পথ, তার চেয়ে বেশি পরিচয় রাজনীতির ইন্ধন। ব্যক্তিগতভাবে আমি মনে করি, পেহেলগাঁওর হত্যাকাণ্ড আমাদের সেই চরম সত্যের মুখোমুখি দাঁড় করায় এখানে মানুষ প্রথমত হিন্দু বা মুসলমান, তারপর ভারতীয়। এই মনোভঙ্গি পাল্টাতে না পারলে কোনো সংবিধান, কোনো সেনাবাহিনী বা কোনো কূটনৈতিক প্রচেষ্টা কিছুই কাজে লাগবে না সেটা কাশ্মীরের জন্য হোক বা অন্যকিছু। কাশ্মীরের এই হামলা যেন আমাদের মনে করিয়ে দিল, সমিত সম্ভাবনার দেশ ভারতবর্ষ আজও কুপমণ্ডুক রাজনীতির কাছে কতটা অসহায়।

স্বাধীনতার সাতাত্তর বছর পরও, মানবিক স্বাধীনতা আমাদের কাছে আজও বিলাসিতা। সেকুলারিজম কোনো আইনি অনুচ্ছেদ নয়, কোনো নীতিগত বাক্যবন্ধ নয়; এটি একটি বেঁচে থাকার দর্শন, যেখানে মানুষের পরিচয় ধর্মের চেয়ে বড় হয়ে ওঠে। আমি বিশ্বাস করি, সত্যিকারের ধর্মনিরপেক্ষতা মানে ধর্মকে অস্বীকার করা নয় বরং সব ধর্মের মাঝে মানবতার এক গভীর সেতুবন্ধন নির্মাণ করা। আমাদের সংবিধান যে সমানাধিকারের কথা বলে, তার মূল চেতনা এই

সেকুলারিজমেই নিহিত। কিন্তু যখন রাজনীতি ধর্মের বিভাজনকে পুঁজি করে সমাজের রক্তে বিষ ঢালে, তখন সেকুলারিজম কেবল একটি নীতিশাস্ত্র নয়, একটি সাহসিকতার নাম হয়ে দাঁড়ায়। পেহেলগাঁওর রক্তাক্ত ঘটনাই আমাদের চোখে আঙুল দিয়ে দেখিয়ে দিল যেখানে ধর্ম পরিচয় হয়ে দাঁড়ায় বাঁচা-মরার মাপকাঠি, সেখানে সেকুলারিজমের অপরিহার্যতা আরো তীব্রভাবে চিৎকার করে ওঠে। এই দেশ আজ যতদিন তার বৈচিত্র্যের মধ্যে ঐক্য খুঁজে পাবে না, যতদিন মানুষ মানুষের আগে হিন্দু, মুসলমান, শিখ, খ্রিস্টান হবে, ততদিন সেকুলারিজম আমাদের কাছে কেবল একটি অসমাপ্ত স্বপ্ন হয়ে থাকবে। আজ পেহেলগাঁওর মৃতদেহগুলো আমাদের সামনে প্রশ্ন ফেলে আমরা কি সেই স্বপ্ন বাস্তবায়িত করার সাহস দেখাতে পারবো? নাকি বারবার ঘৃণার পায়ের নিচে পিষে যেতে থাকবে? প্রশ্ন উঠেছে মৌলবাদ নিয়েও। মৌলবাদ হলো সেই বিকৃত মানসিকতা, যা ধর্মের শুদ্ধতাকে বিকৃত করে। মৌলবাদ কোনো একক ধর্মের সমস্যা নয়; এটি মানবতার শত্রু। যে মুহুর্তে ধর্মকে অস্ত্র বানিয়ে তলোয়ার তুলে ধরা হয়, সেখানেই হারিয়ে যায় আসল ধর্মের আলো। পেহেলগাঁওর হামলাকারীরা যদি সত্যিকারের ধর্মবিশ্বাসী হতেন, তবে জানতেন-একটি প্রাণ বাঁচানো হাজারটি ইবাদতের চেয়েও শ্রেয়। আমার এই লেখার মূল উদ্দেশ্য কোনো ধর্মের প্রতি আস্থা বা অবিশ্বাস প্রদর্শন নয়। কারণ আমি বিশ্বাস করি-ধর্ম তার শুদ্ধতম রূপ নেয় মানবতার জন্যে আশ্রয়, এবং শান্তির জন্য পথনির্দেশ। সত্যিকারের হিন্দু, মুসলিম, শিখ, খ্রিস্টান, বৌদ্ধ সবাই প্রেম, সহিষ্ণুতা আর ন্যায়ের কথা বলে। আমার আঘাত সেই বিকৃত চেতনার বিরুদ্ধে, যারা ধর্মের পবিত্র নাম ব্যবহার করে রক্তপাতের রাজনীতি চালায়। যখন পেহেলগাঁওর আকাশে নিরপরাধ মানুষের আত্মনাদ ভেসে ওঠে, তখন আঘাত লাগে শুধু ধর্মেরই নয় আঘাত লাগে মানবতারও। আমার কলম তাই কোনো মন্দির, মসজিদ, গির্জা বা গুরুদ্বার ভাঙার পক্ষে নয় আমার কলম কেবল সেই ঘৃণার দেওয়ালগুলিকে ভাঙতে চায়, যেগুলো মানুষের বুকে মানুষের প্রতি অবিশ্বাস বপন করে। আমি কেবল মানুষের পক্ষেই আছি ধর্মের নয়, ধর্মের নামে চালানো অন্যায়েও নয়।



THE HURT OF MIND AND HEART WHEN FRIENDSHIP FALLS APART: THE PAIN OF A SEVERED BOND

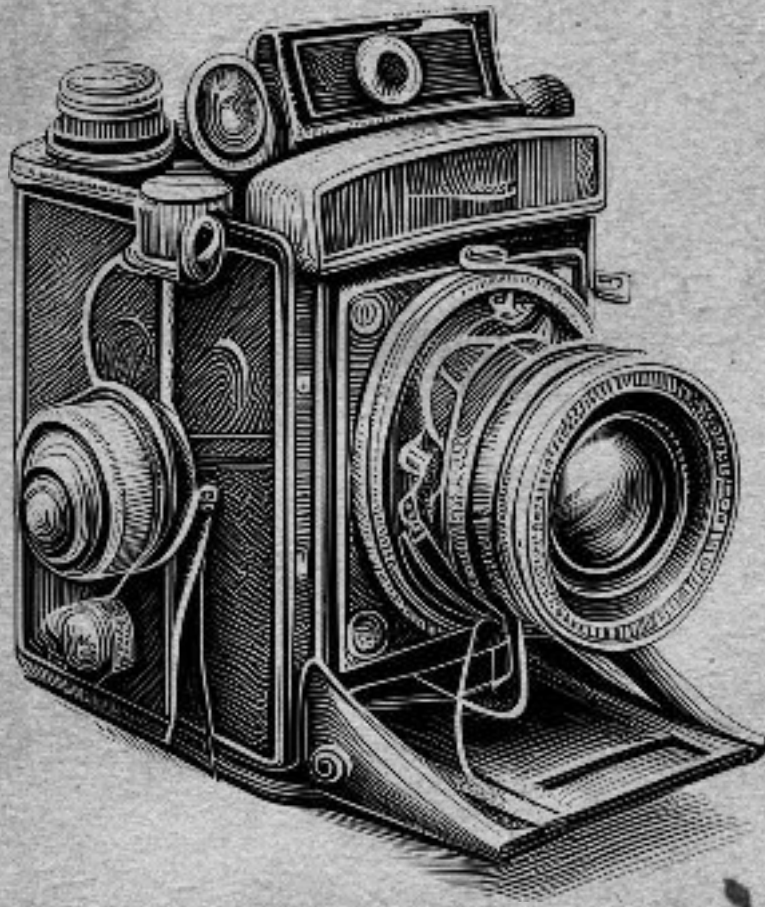


Soumyadeep Namhata
(1ST YEAR)

আবেগ নামক এক মায়ারী বন্ধুর জুর চাহনি ও বেজাঘাতের বশবর্তী হয়ে আমার সাহিত্যের ছুরি শাগিত হওয়ায় তাদের তিনজনের প্রতি কিছু কর্তিত পদগুচ্ছ

ইহা পুনর্মিলন এবং পুনর্জাগরণের ফয়েলে আবৃত এবং পুনরাগমনের কামনায় আবেগের আবেশে উপছে পড়া এক আনন্দ-হাসি-মজার অধ্যায়ের এক বিষাদ-ক্লিষ্টময় সমাপ্তির প্রায়সারাংশ যা সেই কানিমালিন্ত এবং পঙ্কুগন্ত অধ্যায় রূপী বন্ধুত্বকে আবার মনের গহন অন্ধকার থেকে, সময়ের প্রবহমানতায় অবচেতন মনের মনস্তাত্ত্বিক এবং বৌদ্ধিক মানচিত্রের ধুমিময়-ফ্যাকাশে-বিবর্ণ স্মৃতির; স্মৃতি রোমন্বনের সুযোগের পথ খুলে ক্ষমাভিক্ষা ও প্রার্থনার সুড়ঙ্গের মাধ্যমে বন্ধুত্বের ক্ষীণ হয়ে যাওয়া বন্ধনকে; কিছু মম মানসপটের কোণাধারে উদিত মন্বব্যের প্রতি দৃষ্টিভঙ্গির দিকের সামান্যতম কৌণিক সরণের ফলশ্রুতি হিসেবে এক অদৃশ্য জুজুর আগমনে তোমাদের মানসে যে রুদ্ধপ্রতাপ ভাবমূর্তির এক অনিচ্ছাকৃত ছায়ার সঞ্চার ঘটেছিল, তাতে আমাদের চতুর্পাক্ষিক সম্পর্কের প্রাণীর অভ্যন্তরীণ ফাটলকে পূর্বাভাস্য ফিরিয়ে আনতে; পুনরায় দৃঢ় থেকে দৃঢ়তর করে সেই পঙ্কু হয়ে যাওয়া, পরস্পরের প্রতি নিয়মিত ঋটিপূর্ণ বোধনপ্রক্রিয়ার অদৃশ্য তাড়নায় সৃষ্ট কদর্য ও পঙ্কিলাবর্ত বন্ধুত্বকে এবং সংশ্লিষ্ট সময়ের ঘেরাটোপে তাদের প্রতি আমার অচেতনতায়, অনিচ্ছুকভাবে কোনোরূপ সম্মানহানিকর, অপ্ৰীতিমূলক কর্মকাণ্ডের যে বিষাক্ত তীর বর্ষিত হয়েছিল তাহার ফলে তোদের মানসে আমার চরিত্র, ব্যক্তিত্ব এবং সর্বোপরি আমার আত্ম-গুণাবলির ভাবধারা নইয়া যে সন্দেহ এবং উদ্ভিগ্নতার নির্যাস কর্কট রোগের ন্যায় ছড়িয়ে পড়েছিল, যাহা পুনরায় বন্ধুত্বের বন্ধন কে ভিতরে কেটে ফেলতে ও ওই বন্ধুত্বের প্রাণসত্তাকে পূর্ণদমে হত্যা করতে ত্বরান্বিত করেছিল; আমাকে আত্মদোহিতার কারাগারে রুদ্ধ করে ওইদিন অশেষ অভ্যন্তরীণ নিপীড়নের শিকার হয়ে নিজেকে অদৃষ্টের শাপান্ত বলিয়া বোধ হয়েছিল যাহা আমার মানসের ধী-র সীমানায় ধরা পড়ে পরিস্থিতির অশেষ ও জ্বালাময় উপহাস ও এক অদৃশ্য বন্ধনের শিকলে বাঁধা পড়া সত্ত্বেও , সেই বন্ধুত্ব কে আবার সর্বোৎকৃষ্টদ্যমে চাফা করে নেওয়ার এবং সর্বোপরি বাস্তবরূপী হাতুড়ির করাঘাতে পিষ্ট ও অর্ধমৃত বন্ধুত্ব সঞ্জীবনী মন্ত্রের দ্বারা প্রাণসঞ্চারের কাতর , পিপাসার্ত জার্জি জানাই যা আমার আবেগমাখা হৃদয়ের এক অপ্রস্ফুটিত কলি।





PHOTOGRAPHY

“The camera sees more than the eye, so why not make use of it?” – Edward Weston



SAHABUDDIN SEKH

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



SAHABUDDIN SEKH

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



UDIT SARKAR

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



UDIT SARKAR

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



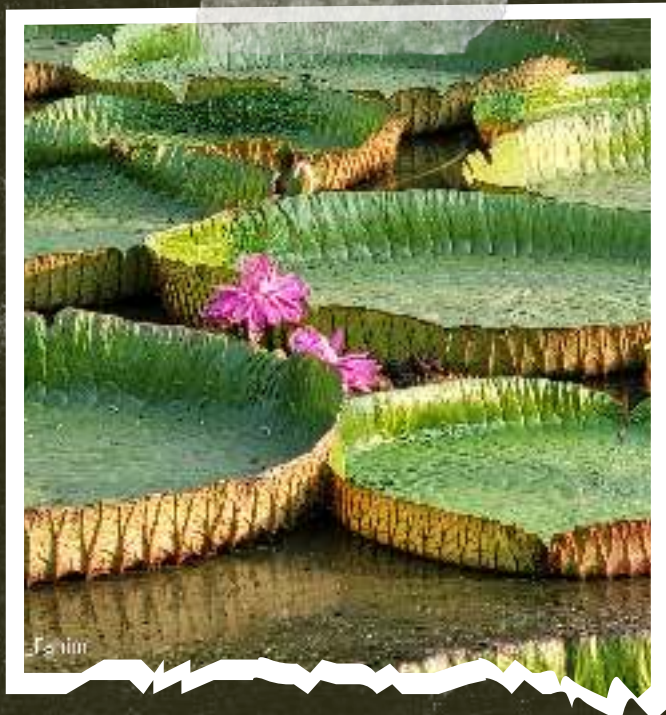
ANKAN KUMAR
MAJUMDER

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



Shot by Fahim



**CHAUDHARY FAHIM
AHMAD**

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



DEVSMRITI MAJEE

3RD YEAR

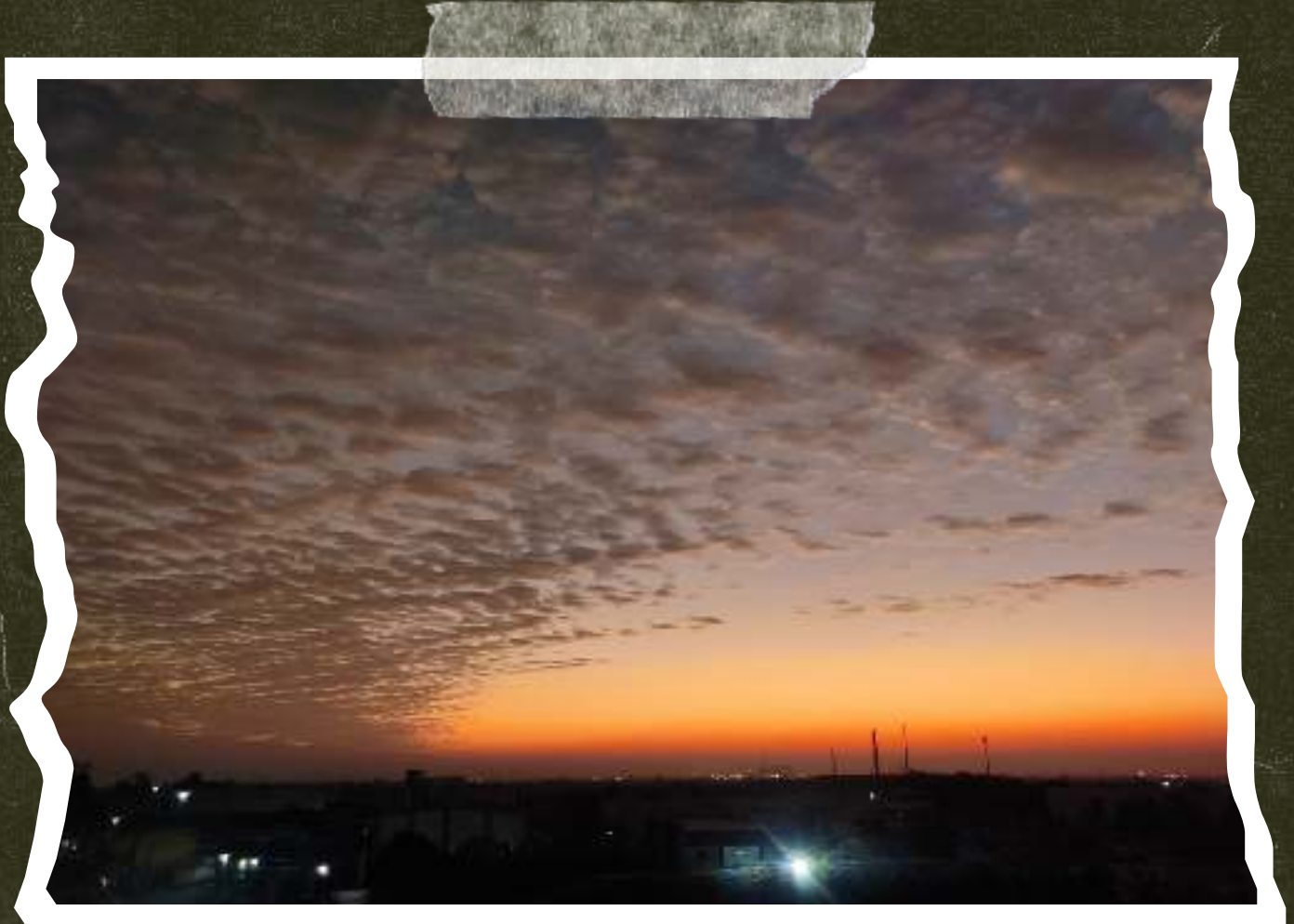
DEPARTMENT OF CIVIL ENGINEERING



SHOVAN GHOSH

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



ANINDYA CHATTERJEE

FINAL YEAR

DEPARTMENT OF CIVIL ENGINEERING



PRALAY DAN

3RD YEAR

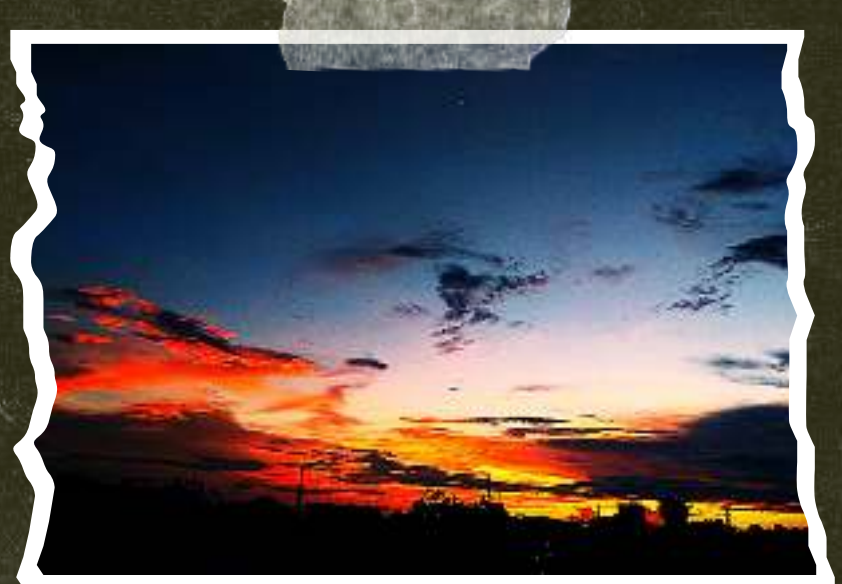
DEPARTMENT OF CIVIL ENGINEERING



RIMPA GARAI

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



ANIRBAN KAR

FINAL YEAR

DEPARTMENT OF CIVIL ENGINEERING



SHUVAM MAJEE

FINAL YEAR

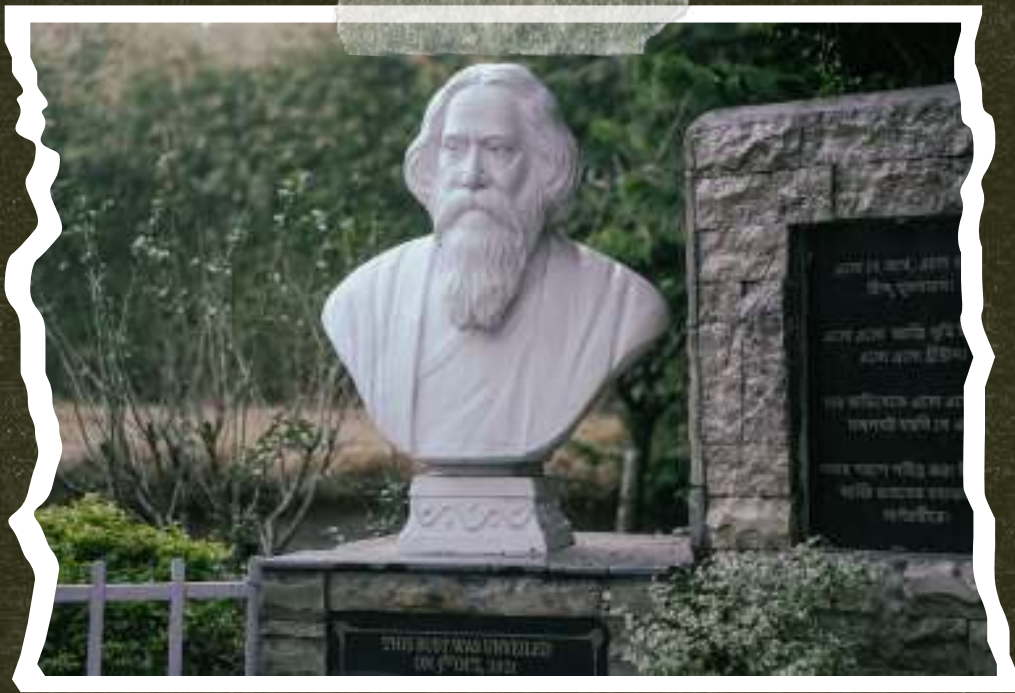
DEPARTMENT OF CIVIL ENGINEERING



SANDHAYA KUMARI

2ND YEAR

DEPARTMENT OF CIVIL ENGINEERING



NABAJYOTI HALDAR

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING



**DR. B.C. ROY
SOCIETY
ENGINEERING**



EVENTS & WORKSHOP



CMERI CAMPUS VISIT

TUESDAY, 25 FEBRUARY, 2025

www.bcrec.ac.in

MUNICIPAL SOLID WASTE DISPOSAL SYSTEM (I-MSWDS) DEVELOPED BY CSIR- CMERI, DURGAPUR.

BCREC students from the Civil Engineering batch of 2027 got the opportunity to visit the Integrated Municipal Solid Waste Disposal System (i-MSWDS) developed by CSIR-CMERI, Durgapur. Our institute Dr B C Roy Engineering College, Durgapur has the MoU with the CSIR-CMERI Durgapur and our students with the faculty members Prof. Md Hamjala Alam, Prof. Chanchal Das and Prof. Koynndrik Bhattacharjee visited the CMERI campus. They got the idea about the different units like;

1. Mechanized Segregator,
2. Biogasification section,
3. Vermi-composting section,
4. Biomass Briquetting and Gasification section, and
5. Polymer Waste Management section

These sections and their functions aim for the sustainable solid waste management and modern environmental engineering techniques. This experience will enrich their academic knowledge as well as practical understanding of waste-to-energy systems



MEGALITH IIT KHARAGPUR

SATURDAY, 08 MARCH, 2025

www.bcrec.ac.in

INDIA'S LARGEST CIVIL ENGINEERING TECHNICAL FEST MEGALITH IIT KHARAGPUR

A total of 18 students participated in this year's IIT Kharagpur Civil Engg Dept Tech Fest MEGALITH. 1st and 2nd prizes in the model competition were won by BCREC Civil Dept students. 3rd Prize in the bridge building competition 'Instridge' was won by another group. It was a very good achievement as students from other premier Institutes of the country participated in the competitions. Our students competed with them won the prizes. Congratulations to all the winners.



ESSAR OIL AT LOCAL EXTRACTION SITES

TUESDAY, 12 NOVEMBER, 2024

www.bcrec.ac.in

DURGAPUR DID ON-SITE SOIL TESTING FOR ESSAR OIL AT LOCAL EXTRACTION SITES

The Civil Engineering Department at Dr. B. C. Roy Engineering College, Durgapur did on-site soil testing for Essar Oil at local extraction sites. This is the second engagement in this month, where Dr. Shovan Roy and Ajitesh Bhattacharya visited their site for providing their expertise of soil testing.



ENGINEER'S DAY CELEBRATING BCREC CE DEPRT.

THURSDAY, 05 SEPTEMBER, 2024

www.bcrec.ac.in

DEPARTMENT OF CIVIL ENGINEERING STUDENTS HAD AN AMAZING TIME CELEBRATING ENGINEER'S DAY IN ASSOCIATION WITH (ISET STUDENT'S CHAPTER) AND INSTITUTION'S INNOVATION COUNCIL (IIC) OF BCREC

In association with Indian Society of Earthquake Technology (ISET Student's Chapter) and Institution's Innovation Council (IIC) of BCREC, Department of Civil Engineering Students had an amazing time celebrating Engineer's Day with a special event and an exciting quiz program dedicated to the spirit of innovation and engineering excellence! Students and faculty came together to honor the contributions of engineers on the occasion of Dr. M. Visvesvaraya and to participate in a fun-filled quiz that tested their knowledge across various engineering fields. The program of this year based on the theme of "Sustainability using AI Driven Technologies" Soumyadip Das, Assistant Professor, Department of Civil Engineering, BCREC, Life Member of ISET and Faculty Coordinator of ISET Student's Chapter in BCREC hosted the program in the seminar hall of APC Roy Bhawan, Department of Civil Engineering, BCREC. Prof. (Dr.) Sanjay Sengupta, Professor and Head, Department of Civil Engineering, BCREC delivered the welcome address to the gathering and discussed the importance of the program and this year's theme. Dr. Taniya Chakraborty, Assistant Professor, Department of Basic Science & Humanities, BCREC was there and acted as the moderator of the quiz.

The quiz was packed with challenging questions, friendly competition, and a lot of enthusiasm! Congratulations to all the participants, and a special shoutout to the winners who showcased their impressive engineering knowledge!

A big thank you to every student who helped organize this event and to all the participants who made it a success. Let's continue to innovate, inspire, and engineer a better future together!

Happy Engineer's Day to all the brilliant minds out there!



OOMS BITUMEN AND POLYMER PLANT

WEDNESDAY, 04 SEPTEMBER, 2024

www.bcrec.ac.in

DURGAPUR DID ON-SITE SOIL TESTING FOR ESSAR OIL AT LOCAL EXTRACTION SITES

Industrial site visit of Civil Engg 3rd year students to Ooms Bitumen and Polymer plant in Panagarh where a new age cutting technology of mixing polymer and bitumen for road construction.



MACHINE LEARNING FOR STRUCTURAL ENGINEERING ADVANCEMENTS

WEDNESDAY, 28 AUGUST, 2024

www.bcrec.ac.in

ADVANCEMENTS IN MACHINE LEARNING FOR STRUCTURAL

We are thrilled to share that our recent seminar (on 28 August, 2024, in the Seminar Hall, APC Roy Bhawan, BCREC) on "Advancements in Machine Learning for Structural Engineering : From Identification to Design" in association with The Institution of Engineers (India) (IEI) Durgapur Local Centre under the IEI Students' Chapter of Civil Division (CV Division) was a tremendous success. It was an incredible opportunity to dive deep into various applications of Machine Learning and AI tools for the Civil Engineering Structures with insightful presentations and engaging discussions led by our expert speakers. Prof. (Dr.) Sanjay S Pawar graced the chair of chief guest and Prof. (Dr.) Sanjay Sengupta was the guest of honor. Dr. Alope Kumar Datta, (Associate Professor, Department of Civil Engineering, NIT Durgapur), Dr. Dipankar Dutta (Associate Professor, Department of Computer Science and Engineering, University Institute of Technology, Burdwan) and Dr. Gour Sundar Mitra Thakur (Associate Professor & Head, Department of CSE(AI ML), Dr. B. C. Roy Engineering College Durgapur) were the guest speakers. Dr. Sayantan Dutta, along with Soumyadip Das were the coordinators for this event. On behalf of IEI Durgapur Local Centre, Dr. Bimal Das (Honorary Secretary, IEI DLC), Mr. Debi Prasad Das (Convenor, IEI DLC, CV Division), Prof. Bappaditya Das, Institutional Coordinator, IEI Students' Chapter, BCREC, Mr. Manik Banerjee, Mr. Sandip Das and Mr. Raj Mukherjee were present. Dr. Datta presented his recent work on structural engineering using AI. Dr. Dutta and Dr. Mitra Thakur described the basics of Machine Learning and the usefulness of AI tools in Civil Engineering. The students asked a few questions related to the AI tools and from where they should start as beginners! Thanks to all the participants, speakers, and students like Chaudhury Fahim Ahmed, Manas Saha, Udit Sarkar, Sneha Karmakar, and Joydip Mondal, who made this event possible. Your enthusiasm and active participation truly made it a memorable and impactful seminar.

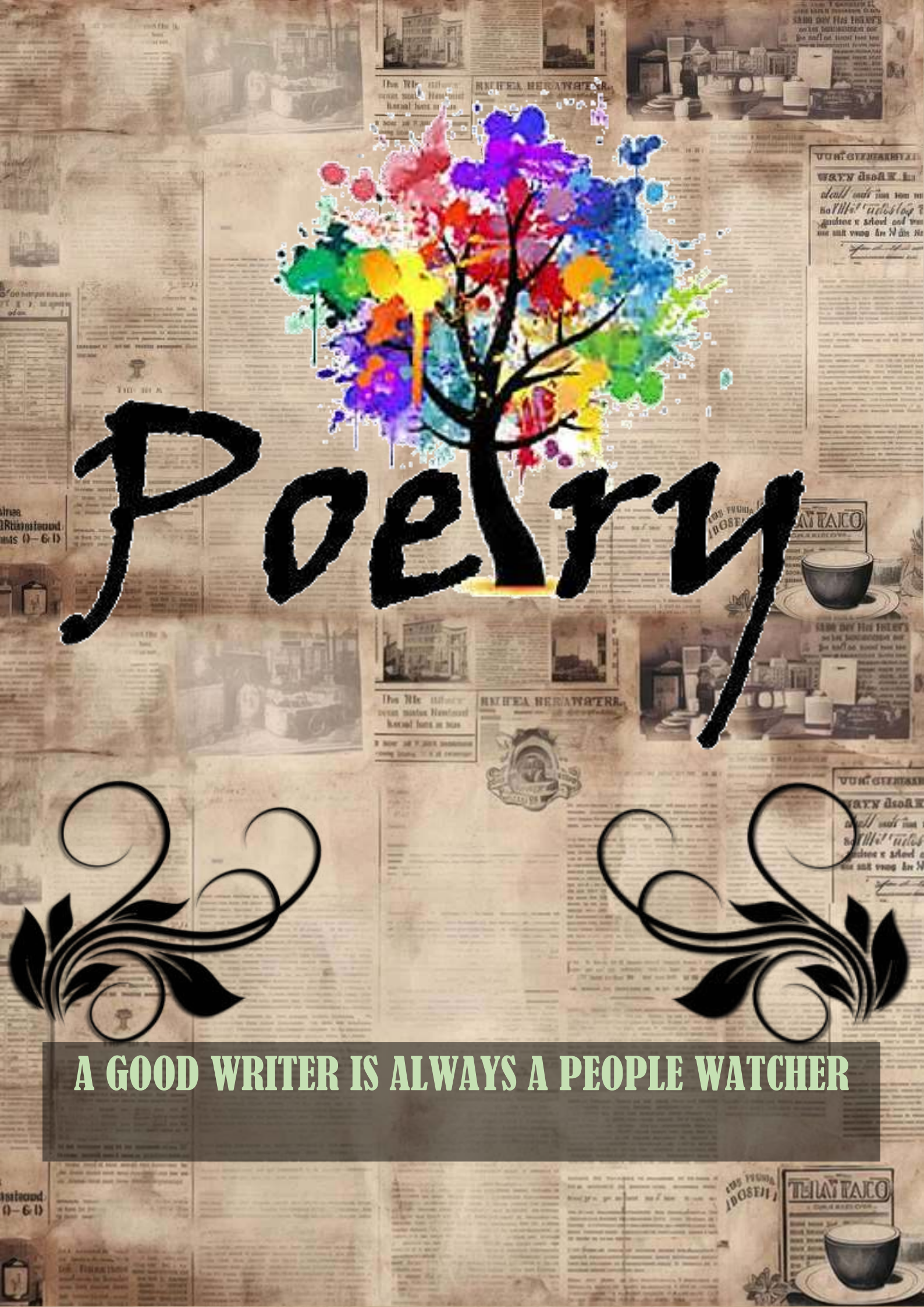




POETRY



A GOOD WRITER IS ALWAYS A PEOPLE WATCHER



EUPHEMISM OF WORLD



Soumyadeep Namhata
(1ST YEAR)

The God send us like a seed
Through people in the world's need.
Believe in yourself,
You are the one to help.
Take Disney or Ford,
A higher destiny you can afford.
Or, take Edison or Wright brother,
The rare immortality, you can gather.
They all left mark in the world,
A great claim also you can hold.
The world teased them, was pulling down,
In every time with a strong stance, they got the crown.
There are lots of opportunities,
You can be one of the great personalities.
Yes, Can! Can! Can! You can change the world,
You can save the deprived kids dying from cold.
You see the kids in the street,
They have not enough to eat.
A summer's disregard;
The broken bottle top,
Are blowin' in my mind,
Can 't you do? can 't you be some kind?
The inclinations and droughts are everywhere,
Who am I? Who are you? to be blind, pretending not to see needs of their.
The powers are pressing down,
The oppressed are doing moan.
Where are the enthusiasms?
Where are the optimisms?
Are they gone to be set in dark?
Can't these be used to mark?
Study the great stories,
And digest these, no worries.
Dissect these with a scientist mind,
The great outcomes you must bind.
Start with the man in the mirror,
No message could have been any clearer.
I'm saying you to change your ways,
You will reach to a better place.



সিস্টেম



অনিন্দিতা সেনগুপ্ত

বড় হযে ফুটে, কি হবি? নাম করা এক ডাক্তার?
বৃথা স্বপ্ন দেখো না মা,
এই পচন ধরা নষ্টে সিস্টেম ডাক্তার আন্ডায় হতে
দেবে না।

আচ্ছা না হয় ডাক্তার হ'লি, মস্ত বড় ইঞ্জিনিয়ার?
রাস্তা-বেল-মোটো-সেহু, গছবি ক'চ দেখার ম'চ।
সে সব দিন গেছে মা গো,
আজ এ আই গছবে সব, বাকী জগৎ অন্ধকার।
আচ্ছা বাবু, তাহলে হবি ?
নামী জ্ঞানী কোনো প্রফেসর।

ক্ষমতাশীল আজ যে, সেই মানুষ গছার কারিগর।
সস্তা মেকী চোখ ধাঁধানো, শিক্ষার এই বাজারে
আজ ডিগ্রী কেনা - বেচা চলে শুধুই সস্তাদারে।
আচ্ছা তবে কি হবি বল?
মস্ত বড় ব্যারিস্টার?

মাগো, যেথায় বিচার হৈ কাঁদে মিরালয়,
ব্যারিস্টার তো পুতুল হৈ হবে,
হুলের হাতের খেলনায়া।
তবে তোকে নিয়ে যে এত স্বপ্ন,
কিছুই সত্যি হবে না?
হবে গো মা, কথা দিলাম,
তোমার হুলে মানুষ হবে।
এই পচনধরা সিস্টেমটার
শক্ত হাতে হাল ধরবে।।



জানি না এই পচনধরা System টাকে সত্যি কোনোদিন Recover করা যাবে কিনা



THE ART OF CIVIL ENGINEERING



Shyam Sundar Roy
(3RD YEAR)



*Under the sky so wide and blue,
We build the world for me and you.
With steady hands and plans so clear,
Civil engineers work year by year.
From tall bridges that touch the sky,
To smooth roads where cars pass by,
We use stone and steel with care,
Creating wonders everywhere.*



*The sound of cranes, machines at play,
We work to build a better way.
Strong foundations, tall and true,
Dreams of the future coming through.*

*Big dams hold rivers safe and still,
Tall towers rise with skill and will.
Ports and railways, paths so grand,
Our work is seen across the land.*

*With AutoCAD and tools so smart,
We plan each project from the start.
Buildings strong, they stand so tall,
Ready to face the storms and all.*

*We work through rain, wind, and sun,
To make life better for everyone.*

*For safety first, we take a stand,
Building dreams with careful hands.*

*So, let us cheer for those who build,
With passion strong and dreams fulfilled.*

*Civil engineers, with hearts so true,
We shape the world for me and you!*





IMMORTALITY



Soumyadeep Namhata
(1ST YEAR)

If you want to take the nectar of immortality,

So, master on your work and passion.

If you try to work hard, there's a possibility,

And if you get your obsession.

It is a rare thing,

Don't clip your wing.

Enhance, empower, improve your being,

Let the change in the world you do bring.

You do embrace gratitude,

And thank to the one,

Who helped you to bring a little bit fortitude.

It is all about,

Engraving your name,

To the heart center of everyone, no doubt.

It's all about gaining all the fame.

The more you can affect the lives of people,

The more you will be reaching the top.

The more you will be famous, simple!

The more you will be non-stop.



INSPIRING LIGHT: A TRIBUTE



Soumyadeep Namhata
(1ST YEAR)



*I learned a lot, a lot from you,
I'd never forget to show the respects due.
You are a candle full of purity,
You've lit the others up with surety.
You have impressed all with your personality,
You have embraced all with serenity.
You are the God's gift, a pot of possibilities,
You are the soul full of utilities.
All the decisions you took were marvellous,
To all the difficulties you were poisonous.
You are the man with all possibilities,
You are the man full of novelties.
You are the man who never missed a chance,
Who raised his hand and voice with a positive stance.
You are the man who stretched his hand,
To my problems to make these sand.
You are the man with blood and muscle,
You never forget how to hustle
You are the man with the high level of sense of humor ,
You are the man who never spread a little bit of rumor.
With all the difficulties and obstacles you did heal,
Hope to God, in the next year, all things with you can deal. All the obstacles
and ups and downs in life you can bear,
Hope your well being with a Grand Happy New Year*



আমার ভাষা বাংলা ভাষা



Shovon Ghosh
(3RD YEAR)

বাংলা আমার মাতৃভাষা বলতে লাগে ভয়,
বাংলা বলে হতেছে কি? সবাই তা কয়;
বাংলা আমার ভাষা নাকি? আছে বাংলায় কী?
বাংলা নিয়ে গর্ব করা শুধুই ন্যাকামি।
বাংলায় আছে শুধু আবেগ দিশা নেই কিছু
তবু কেন বাংলা আমায় ছাড়তে চায় না পিছু
চাকরি করতে বলতে কথা হেঁবেজীটা চলে।
বাংলাতে বলতে গেলে মুশকিলে সব পড়ে;
তবুও আমি ভালোবাসি পড়তে বাংলাতেই,
অবশ্য বাংলা ভাষা লুকিয়ে থাকে আমাতেই।



ভালো আছি



Arghya Mukherjee
(3RD YEAR)

তাকে বলে দাও,
তাকে বলে দাও, আমি ভাবছি না আর তার কথা,
ভাবছি না আর সেই মায়াজরা মুখের ভাষা,
রাখছি না তার নিত্য দিনের খোঁজ
দেখছি না তার ফটো, দেখছি না তার সুন্দর চোখের খাতা।
সময়ের সাথে বয়ে যায় কত সময়
বদলে যায় দিন থেকে রাত, রাত থেকে দিন
বদলায় না শুধু, তার মায়াজরা মুখের হাসি
তবুও বলে দিও, দেখার চেষ্টা থাকলেও
দুখি না তাকে, শুধু বুকের ভেতর কাঁজ করে একটাই ভয়
তাকে হারিয়ে ফেলার
সে ভালো আছে, অন্য কোনো গল্পে, অন্য কারোর পাশে
আমাকে পরে না মনে, দিন শেষে আর স্মৃতির ঘরে
তাকে বলে দিও, আমিও ভালো আছি
অন্ধকার আর একলা ঘরের নিদারুণ একটা কোমো।
তাকে বলে দিও, এখনও পারি নি তাকে হারাতে
পারি নি তাকে ভুলতে, পারি নি তাকে ছাড়তে
সেই তো শিখিয়েছিল আমায়, কীকরে আমার করে রাখতে
রোজ এসে কথা বলে স্মৃতিতে আর স্বপ্নে
এখনো সে দেখায় আমার চোখে সেই অহৃষ্ট আশা
ভুলতে চাইলেও পারি না আমি কারণ, সেই তো আমার ভালবাসা।।



ବୃଦ୍ଧି / ବେଢ଼େ ଓଠା।



Rimpa Gorai
(3RD YEAR)

ବୟସ ଯଥା ଧୂଳି ତଥା ଶୁଦ୍ଧି ଥିଲଣା ବାଢ଼ି ଆର
ମାଜ,

ବହୁ ଦିନ ପର ବଢ଼ି ଥାଆର ଘର ଚୁଡ଼ାନ୍ତ ମର ଅସ୍ଥିରତା
ଭିଲିବେ ଏବାର ମର ହିସେବ ଏକଟା ଚାକରର ପ୍ରତୀକ୍ଷାୟ।

ହୋଡ଼ିବେଲାର ପ୍ରତିଭାଶୁଲୋ ଡ଼ିକି ଶାବୁ ଆଜଠ,

ଅପେକ୍ଷାୟ ରସେ ଗୁଡ଼ି କଟ କଟ କାଜ ଓ,

'ଶିକ୍ଷିତ ନୟ ଶିଖିଛି କଟଡ଼ିବୁ,

ବୁଝାନ୍ତେ ଯଥା ମାରି ଭାବି ଏଟା ବୟସ ନା ଶୁଦ୍ଧି

ମଂଥ୍ୟାଗାମି

ଜୀବିତ ଥାକ ମର ହେଲେଶୁଲୋ,

ହାରିସେ ନା ଯାକ ମୟଶୁଲୋ,

ଭେଲାରୋ ଆବାର ବହୁ ମିଶ ମର

ଯଥାମଥାକବେ ଶୁଦ୍ଧି ସ୍ମୃତିରଘର।।

DRAWING

“Drawing is not just a picture, it's a medium through which feelings and real Truths are expressed”

"...🔥🌸'মায়ের' ছোঁয়ায়, 'মায়ের' টানে 'জগৎ' মাতৃময়...
তাই তো আজ, 'তোর' টানে বলি.. জয়...! 'তারা'-র জয়🔥🌸🙏...!"



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

🔥 অগ্নি হতে জন্ম আমার, দ্রৌপদী নাম
যার
আগুনকে দাস বানাবে, এতো ক্ষমতা
আছে কার??🔥



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

"প্রশ্ন থেকেই যাচ্ছে সবার মনে
অন্ধকারে কারা ছিল ওই দলে?? 😞
জাস্টিস তো দিতেই হবে ,নাহলে..
জ্বলবে আগুন ওই রক্তাক্ত সেমিনার হলে।🔥🔥"



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

“সত্যিই, কিছু সময় কিছু বিস্ময়কর স্মৃতি
আপনার হৃদয়কে খুব বেদনাদায়কভাবে
আঘাত করে”



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

"হাসি মুখের অন্তরালে থাকে 😊... এক
নিঃসঙ্গতার খেলাঘর 💔..."

নিজের ঘর অন্যকে সোপে ❤️, অন্ধকার
আজ আমার কুঁড়েঘর ❤️..."



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

🔥 "I WILL SACRIFICE MY BLOOD-STAINED LIFE TO
THE FIRE OF YOUR LOVE"🔥



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

**“THERE IS A PERSON HIDDEN INSIDE A PERSON, IT WILL BE
KNOWN IN TIME WHEN THE EXACT TIME COMES”**

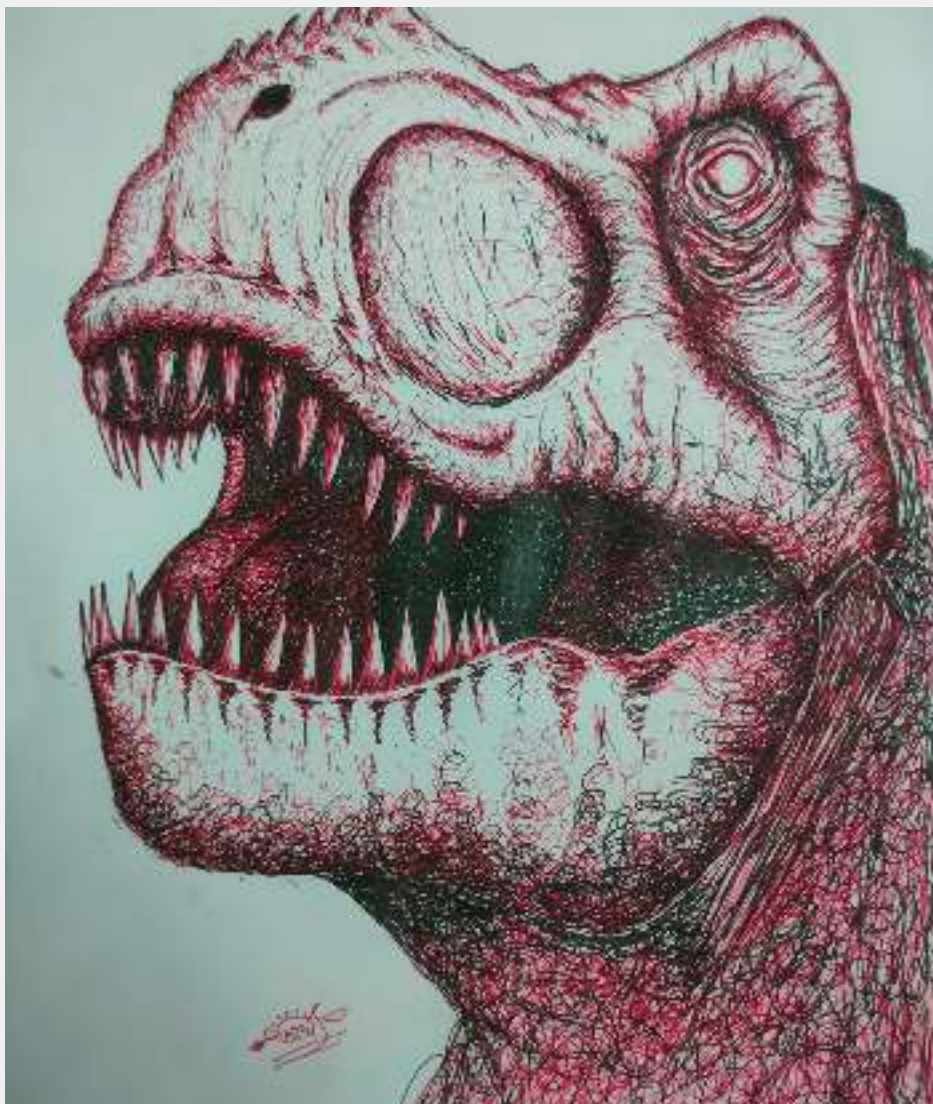


ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

"SOME MOMENTS OF HAPPINESS COVER ALL THE
SORROWS OF LIFE"..❤️💔❤️



ARGHYA MUKHERJEE

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

"তুমি ততটা ভালো থেকেো 😊... যতটা
ভালো থাকলে তুমি আমাকে ভুলে
থাকবে 💔....!"



ARGHYA MUKHERJEE

3RD YEAR

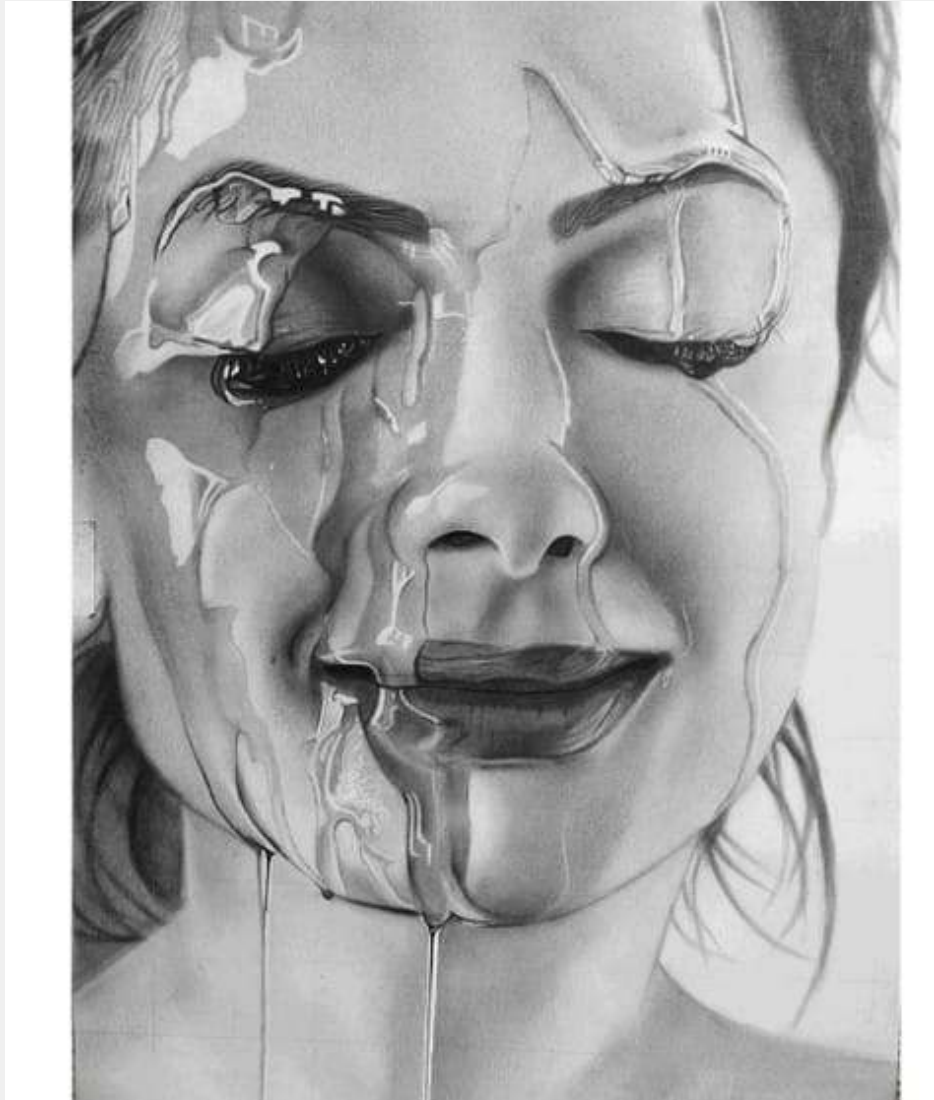
DEPARTMENT OF CIVIL ENGINEERING

"AFTER ALL 😊 ,.

'YOU WILL BE IN MY HEART ❤️',

AND....

.. IN SOMEONE ELSE'S DESTINY 🥀🌟"...



SADIK KABIR

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

“SINGLE LIFE IS THE HOME OF MANY HAPPINESS”



SADIK KABIR

3RD YEAR

DEPARTMENT OF CIVIL ENGINEERING

दशगौरी

VOL: 5

Dear Readers,

As we prepare for our upcoming Publication, we find ourselves at an exciting juncture, poised to curate another enriching experience for you, our valued audience. With each edition of our E-Magazine, we endeavour to deliver content that both captivates and enlightens. Technical Articles, Literatures, Poetry, Drawings and Photography are invited for our next Publication & also we invited your input and suggestions for content that you would like to see featured.

🌀 Guidelines for submission to the magazine:

- Topic of Article: Technical or Literature
- Language: English, Hindi and Bengali
- Word limit: 2000
- Articles are to be sent as Microsoft Word document.
- For Photography and Drawings send photos only in jpg/jpeg/png format.
- Provide Particulars: NAME, Roll. No/Registration No., Year, Branch/ Department, and Contact Number.
- Students of DR. B. C. Roy Engineering College can send their creations.

🌀 You can send suggestions if any at:

- anupam.biswas@bcrec.ac.in
- koyndrik.bhattacharjee@bcrec.ac.in

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DATA THRONE

Your Source of Science's New Trends

VOLUME-I
(2024-25)

Department of
CSE (DATA SCIENCE)

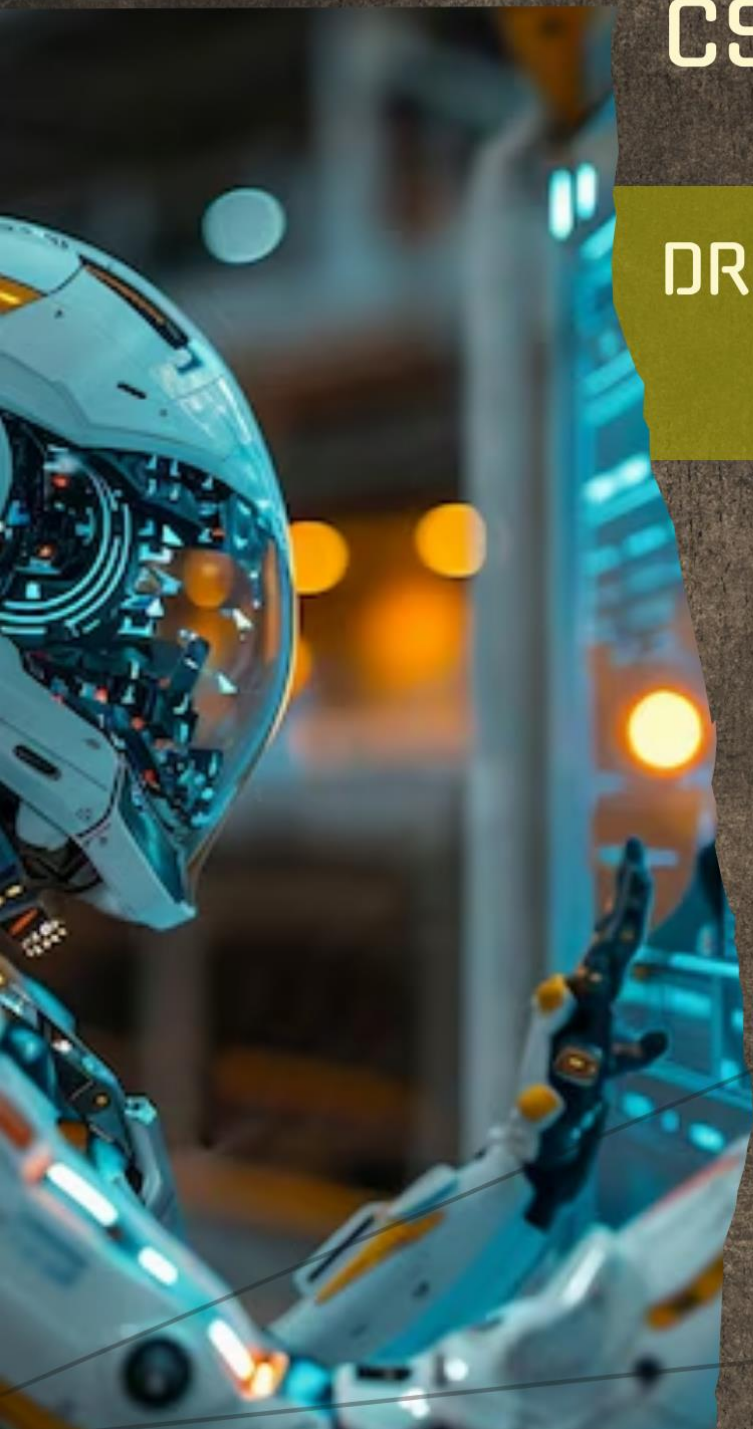
DR. B. C. ROY ENGINEERING
COLLEGE, DURGAPUR

UNVEILING THE
-- NEW AGE DATA

VOLUME EDITORS

VADDADI HEMA

DEBOJYOTI CHATTERJEE



VISION

To better equip students for careers as researchers and experts in data analytics on a worldwide scale, as well as to increase their capacity to contribute to the field of data science by offering comprehensive solutions for societal problems.



MISSION

- M1: To create a business environment that is favourable by offering cutting-edge infrastructure to compete in a data-driven world
- M2: To enable students to offer creative and thoughtful solutions using their data analysis skills and the most recent developments in high performance computing
- M3: By encouraging cross-disciplinary thinking that broadens competence in cutting-edge technology and acquires professional ethics, it is possible to construct data-intensive systems through socio-economic aspects

OUTCOME OF THE COURSE

B.Tech in Data Science is a four-year undergraduate programme to provide an advanced learning opportunity for enthusiastic aspirants who wish to contribute to society by satisfying in-future industry demands for emerging skills and knowledge through interpreting data correctly, so that they can generate trend-setting ideas - today as well as in the future.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- **PEO 1 PREPARATION:** To make students competent for higher studies and employable, to meet industrial requirements.
- **PEO 2 CORE COMPETENCE:** To develop students having core competence in science, mathematics and fundamentals of Data Science to address ever-changing industrial requirements globally.
- **PEO 3 BREADTH:** To create academically conducive environment to learn engineering skills in the domains such as Data Analytics, Data Modelling, Data Visualization and Allied Technologies.
- **PEO 4 PROFESSIONALISM:** To enrich students with professional ethics, leadership qualities, and entrepreneurial skills.
- **PEO 5 LIFE LONG LEARNING:** An ability to engage in lifelong learning for effective adaptation to technological developments.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- **PS01:** Graduates are able to evaluate massive, complex information, extract relevant insights, and make data-driven decisions by applying data science principles, approaches, and tools.
- **PS02:** Solving actual business challenges using understanding of analytics, statistics, and machine learning ideas
- **PS03:** Graduates will be equipped to address challenges in a variety of disciplines by designing, implementing, and applying a range of data-centric methodologies, such as statistical analysis, data mining, and machine learning.
- **PS04:** Graduates will be able to conduct themselves in a professional and moral manner when working as data scientists and researchers, and they will be able to communicate effectively and ethically both orally and in writing to a variety of audiences



Editorial

Reflections on Our Collective Progress

As we bring to you this edition of the Data Science Magazine, we are filled with immense pride and joy in presenting the achievements, initiatives, and creative expressions of our department. This magazine is not just a collection of articles and reports; it is a reflection of our collective passion, hard work, and dedication to excellence.

One of the highlights of this edition is the section dedicated to student projects and research work. It is truly inspiring to see the innovative ideas and solutions being developed by students, which not only demonstrate their technical prowess but also their commitment to addressing real-world challenges.

In addition to the technical content, we have also included creative pieces—artwork, poems, and stories—that showcase the diverse talents of students of Data Science. This magazine is a testament to the fact that our department is not just about academics but also about nurturing creativity and holistic development. We would like to take this opportunity to thank everyone who played a role in bringing this magazine to life. As you flip through these pages, I hope you feel as inspired and proud as we do. Let this magazine serve as a reminder of the incredible potential within our department and motivate us to continue striving for excellence.

Happy Reading!!

Warm regards,

Vaddadi Hema and Debojyoti Chatterjee (*Editors*)
CSE (Data Science) Department
Dr. B. C. Roy Engineering College

From the Desk of Principal, BCREC



Prof. Dr. Sanjay S. Pawar

Dear Team of "Data Thorne 2024" it's really great to know about the magazine that is coming up from Computer Science and Engineering (Data Science). The technology plays a pivotal role in development, and one of the axis of Technology is Data. It has always been said, the Data is the future fuel for development and we are realising it today. The importance of data and it's analysis is significant part of AI which is governing the world in almost all aspects.

This has also proved the importance and significance of Data. The magazine can bring up the stories, technology, applications , case studies and future challenges for students and faculty to explore the technological mind set. I will all the best to team, and look forward for the magazine to come up in a very professional manner.

From the desk of the Registrar of The CSE (Data Science) Department



WRITTEN BY:

**Prof. (Dr.) Arindam Mondal (Registrar)
Dr. B C Roy Engineering College
Durgapur -713206**

It provides me immense pleasure to know that first ever Departmental Magazine "Data Thorne" for the year 2023 of CSE (Data Science), BCREC is ready for publication.

Passion for creativity and developing the skills of innovation are two of the key elements of a successful education. A departmental magazine is one such manifestation of both of these facts to have perfect amalgamation. It harnesses the creative vibes of the academic community, and incorporates the essence of their inspired imagination in the most brilliant way possible. It is a manual that highlights the quality of education and extra-curricular activities that an academic department undertakes to develop all round personality of the students. I am sure that the readers would be strongly benefitted from the contents which are going to unfold to them new insights on various scientific & literary topics and more importantly the contemporary trends from all the corners of life. I believe the holistic efforts would provide a great platform for all particularly the students showcasing out of the classroom skills so as to personify through exploration of their hidden talents. Technology is evolving at a rapid rate and there may be a lot wrong in the style of education. But the pages of 'Data Thorne' I suppose would stamp an authority to prove what is right about the education in the department of Data Science at BCREC.

I take this opportunity to congratulate team 'Data Thorne', students and all others whose tireless efforts that have come to fruition in the form of this publication. May all our students soar high to the skies and bring glory to the world and their profession with the wings of activated learning from CSE (Data Science), BCREC.

I wish 'Data Thorn' all success and hope that this tradition that has been set even within current situation by all will be carried through by the generation of students to come.

With all the best compliments.....

From the desk of the Head of The CSE (Data Science) Department



WRITTEN BY:

**Dr. Chandan Bandyopadhyay (H.O.D)
Associate Professor (Ph.D., Post Doc.),
CSE (Data Science)**

I would like to extend a warm welcome to all of you on the auspicious occasion of inaugurating the first edition of the departmental magazine "Data Throne". It is a great honour for me to be associated with the Department of Computer Science and Engineering (Data Science) at BCREC, which is regarded as one of the finest departments in this institute. I am extremely delighted to be associated with an esteemed

institution that has an impressive history of producing successful engineers, prominent academics, cultivating entrepreneurial skills, supporting scientists, and promoting innovation.

This institute is widely recognized as one of the premier educational establishments in eastern India. The Department of CSE (Data Science) upholds the esteemed reputation earned by the institute. This department is comprised of highly qualified faculty members who hold degrees from prestigious foreign universities as well as renowned Indian institutions such as IITs and NITs. The department's faculties engage in active research collaborations with prestigious universities in the United States, Germany, Belgium, the United Kingdom, Singapore, and France.

In addition to its international linkages, the department maintains robust research collaborations with prestigious Indian institutes such as IISc Bangalore, ISI Kolkata, IIT Kanpur, IIT Kharagpur, NIT Calicut, NIT Trichy, NIT Durgapur, IEST Shibpur, and Jadavpur University.

I express my felicitations to both my students and faculty members who have exerted much effort in the publication of the first edition of our departmental magazine.





WRITTEN BY:

**Dr. Saibal Majumder
Assistant Professor (Ph.D.)
CSE (Data Science)**

The Story of Rajesh Sharma: How Creativity Led to Success

Rajesh Sharma was an average student at best during his four years of B.Tech in computer science and engineering. He scored decent but not outstanding marks in most subjects and rarely stood out among his classmates. However, Rajesh had a creative bent of mind and enjoyed thinking of new technological solutions to problems.

During his final year project, Rajesh decided to develop an AI-based voice assistant that could automate various tasks for college students. He spent months researching, coding and testing different algorithms to make the voice assistant smart enough to be useful. His project supervisor was initially skeptical that Rajesh could create something innovative, given his average performance till then.

However, Rajesh persisted with his work with great passion and dedication. Slowly, his voice assistant started showing promising results and was able to perform tasks like setting reminders, searching information online and automating routine work. By the time his final project demonstration came, Rajesh had created a fully functional voice assistant that impressed not just his professor but also the other faculty members who came to evaluate the projects. Rajesh's project was selected as the best in his batch. He was invited to demonstrate his work to various companies visiting the college for campus placements. One prominent tech company was so impressed with Rajesh's creativity that they offered him a high package job, much higher than what was on offer to other students.

Rajesh's success story shows how creativity, passion and perseverance can help one achieve far more than what average performance may indicate. His voice assistant may have started out as just a college project, but it became a turning point in Rajesh's life by opening up new opportunities for him. Creativity helped Rajesh think differently and develop something truly useful, paving the way for his success.



WRITTEN BY:

**Dr. Sovan Bhattacharya
Assistant Professor (Ph.D.),
CSE (Data Science)**

Valor's Ascension

In the quiet village of Eldoria, nestled between rolling hills and lush forests, lived a young man named Aiden. Aiden was known throughout the village for his boundless courage and unwavering determination. From a young age, he had displayed a spirit that was larger than life itself. Eldoria was not without its challenges. A dark shadow loomed over the village in the form of a fierce and menacing dragon named Drakor. The dragon's presence cast a constant cloud of fear and despair, as it demanded a regular tribute of livestock and resources from the villagers to spare their homes from destruction. One fateful day, as Aiden watched the villagers reluctantly hand over their offerings to the dragon, something stirred within him. He couldn't bear to see his people live in fear any longer. Determined to put an end to this tyranny, Aiden made a bold decision – he would set out to confront Drakor and free Eldoria from its clutches. Armed with nothing but his unyielding courage and a determination that burned like a wildfire, Aiden embarked on a perilous journey. He trekked through dense forests, crossed treacherous rivers, and traversed forbidding mountain ranges. Along the way, he encountered challenges that tested his resolve, but his unwavering determination carried him forward. Aiden's journey was not without companions. He met a wise old sage named Elara, who imparted ancient knowledge about dragons and their weaknesses. He also crossed paths with a skilled archer named Kael, who had his own score to settle with Drakor after losing his family to the dragon's wrath. Together, they formed an unbreakable bond and forged ahead with renewed strength.

As they approached Drakor's lair, the tension in the air grew thick. The moment of reckoning had come. With a heart pounding with both fear and determination, Aiden faced the enormous beast. He stood before Drakor and boldly demanded justice for his village and an end to the reign of terror. A fierce battle ensued, as flames and arrows clashed with sheer willpower and determination. Aiden and his companions fought valiantly, utilizing their strengths and exploiting the weaknesses they had learned from Elara's teachings. The battle raged on for hours, but slowly, Aiden's unyielding spirit began to tip the scales in their favor. In a final, climactic moment, Aiden found himself standing face-to-face with Drakor, both battered and worn. With a roar that seemed to shake the very foundations of the earth, Aiden delivered a mighty blow, plunging his sword deep into the dragon's heart. Drakor let out a deafening cry before collapsing to the ground, its reign of terror finally over. The villagers rejoiced as the news of their victory spread throughout Eldoria. Aiden had not only slain the dragon but had also united the village in a way they had never thought possible. His courage and determination had inspired them all to face their fears and stand up for what was right. Aiden's story became legend, told and retold through generations. He went on to become a symbol of courage and determination, reminding all that even in the face of the most daunting challenges, the human spirit could rise above and achieve greatness.



WRITTEN BY:

Prof. Banashree Chatterjee
Exam Coordinator
(Currently pursuing Ph.D.),
CSE (Data Science)

"Double Duty:

Emma Hayes' Masterclass in Balancing Career
and Family"

Emma Hayes had a remarkable way of managing her busy life. By day, she was a standout project manager at a tech company, guiding her team with skill and kindness. Her mornings began with meditation and a quick check on her work schedule before she headed out to the city.

When she came home, Emma switched gears effortlessly. Even after long days at work, she made time to help her daughter with school projects and enjoy family dinners. Her evenings were filled with joy, from cooking together to sharing stories.

One day, her hard work paid off with praise for a successful presentation. Yet, the real highlight was a text from her husband, Tom: "Dinner's ready! Can't wait to hear about your day." Emma found fulfilment in juggling both her career and family life, finding balance and happiness in both worlds.



WRITTEN BY:

Mr. Shubhranshu Gorai
Technical Assistant (MCA),
CSE (Data Science)

অপেক্ষা নতুন ভোরের

উঠো জাগো বন্ধু মোর, দূর করো ভয়,
বিবেকানন্দের বাণী দিক নব জয়।
ইঞ্জিনিয়ার হবে তুমি, করবে দেশ গড়া,
জ্ঞান আর পরিশ্রমে জয় করবে বাধা।

কঠিন পথে বাধা আসে, আসে পরাজয়,
ভেঙো না কখনো তুমি, রাখো আত্মময়।
স্মরণে রাখো বিবেকানন্দ বলেছেন যাহা,
"ওঠা-পড়া জীবনের নিত্য লীলা এ তো"।

গণিত, বিজ্ঞান, যন্ত্র - এ সব তোমার হাতিয়ার,
এর সাথে যোগ করো মানবতার আধার।
শুধু নিজ নয়, ভাবো সকলের হিত,
তবেই হইবে তুমি প্রকৃত পণ্ডিত।

চ্যালেঞ্জ যত আসুক, ডরো না কখনো,
প্রতিটি বাধা তোমায় করবে শক্ত আরো।
বিবেকানন্দের মতো জাগাও নিজের শক্তি,
তোমার মধ্যেই আছে অসীম সম্ভাবনার ভক্তি।

শুধু পাঠ্য বই নয়, পড়ো জীবনের পাতা,
সেবা করো, শ্রম দাও, বাড়াও মানবতা।
ইঞ্জিনিয়ার হয়ে তুমি গড়বে নব বিশ্ব,
তোমার মাঝেই আছে সেই মহাবিশ্ব।

The Treasure of Memories



**THE FIRST BATCH OF
COMPUTER SCIENCE
(DATA SCIENCE)
2022 – 2026**

**FROM STRANGERS
TO SOME
UNBREAKABLE BONDS...
WE CAME A LONG WAY.**



**EVERYTIME
HOLDING ON TO
EACH OTHERS' BACK
AND NOT LETTING
OTHERS TO FALL.**



**OUR TEACHERS ACT LIKE
OUR SHIELDS, PROTECTING
US FROM THE CONFUSION
AND GUIDING US THROUGH
THE CHALLENGES OF
LEARNING.**



**MAYBE MEETING
THESE PEOPLE MAY
NOT BE THE GOOD
PART BUT IS THE BEST
PART IN THE JOURNEY
OF LIFE...**



**THE JUNIOR BATCH OF
COMPUTER SCIENCE
(DATA SCIENCE)
2023 – 2027
"GROWING BRIGHTER AND
MORE CAPABLE WITH
EACH STEP."**



MPEMBA EFFECT

Alina's exam was finally over, and it was a cold morning in Moscow. She and her parents were busy organizing their eagerly anticipated trip to her grandparents' place in countryside. The journey was planned for the following day. Alina was overjoyed to finally meet her grandparents after a lengthy absence. She would meet her cousins, her childhood friends, go swimming, and enjoy her vacation to the fullest. But the very afternoon, a severe cold wave swept through Russia. The mercury dropped to -25 degrees Celsius and the flights got delayed. They were compelled to remain inside their home. Alina became upset about the possible cancellation of the trip. She was simply seated by the fireplace and gazing out the window. Her father noticed her dejected expression and decided to do something to cheer her up.

"Would you like to see a magic trick?" father asked

"I would love to!" she exclaimed in response

"Then bring me a mug of hot boiling water and a pail of cold water from the fridge" he said.

He then escorted Alina outside. Both mugs were hurled upward by him. She was genuinely surprised by the fact that the hot water turned into snow while the cold water simply fell as liquid.

She asked in surprise, "Dad, why didn't the cold water freeze first?"

"You assume that the cold water was supposed to freeze up first because it was already cold, right? At least that's what basic thermodynamics says. but no if hot water and cold water are cooled simultaneously, the hot water will freeze first. This is indeed physics. And this effect is called Mpemba Effect."

Alina was extremely surprised, but her internal drive to find out more about this impact led her to enter her familiar online space. When Alina searched for the Mpemba effect on the internet, she discovered a wealth of breath-taking recordings from around the globe. She became enamoured while viewing those videos. All on a sudden she realized someone was standing behind her. She turned around right away to see a tall, dark boy in front of her who was about her age. "Who are you?" Alina whispered.



"I'm Mpemba", the boy responded kindly "I'm from Tanzania, a very poor country in Africa"

"Why are you here?" Alina asked

"The phenomena that you've observed today regarding the immediate freezing of hot water was actually discovered by me back in the year 1963 when I was a student your age. "

"Oh, that's so good! How did you discover that phenomena?" Alicia asked

"When I was a student your age in 1963, I made the discovery that causes boiling water to immediately freeze, which you have seen today."

"Oh, that's wonderful! How did you learn about that occurrence?"

"We were having our cooking classes and I accidentally discovered that ice cream could be made more quickly in hot water than in cold water. I informed this to our cooking class instructor but he didn't believe me. So, I was trying to find some other platform to show my recent findings. Fortunately, the same time the physics science project was going on in our school so I made the decision to create ice cream in front of everyone. This was my science project. I rapidly condensed hot water into ice cream in front of everyone. I showed up with all my supplies on the designated day. In two dishes, combined everything, a bubbling pot of water. in a different basin of icy water. After that, I refrigerated the both. In just one and a half hours, heated water can be turned into ice cream. On the other hand, the mixture is still liquid in the chilly pot."

"Your great spectacular performance must have impressed your teachers." She said smilingly

"Yes, since this was a new occurrence for each of them." Mpemba replied

"Wake up Alina Wake up! I got good news for you.". Her father's voice roused her from sleep.

She realised that she was still on the couch The sky was clear and her father told her that their flight operation was resumed. So, the journey for tomorrow was confirmed.

Alina narrated the whole story of her dreams to her father and asked "What is the scientific reason behind this mpemba effect?"

Her father explained "Interestingly, no specific scientific explanation has been found for this phenomenon. Many have interpreted it in many ways. But no single definitive explanation can be singled out. Some of the popular explanations are Evaporation Theory, Convection Current Theory, Supercooling Theory etc. But recently scientists have taken it to another level through amolecular theory." This mpemba phenomena is still a mystery for the scientists.

Written By:
MEHULI LAHIRI
3rd year

My opinion on “Dr. B. C. Roy Engineering College”

BCREC is one of the famous colleges in India. It has got a wide educational platform, workshops and lecture sessions to make anyone educated, skilled and successful engineer. I was proud to take admission in the college. Within the months I am studying in this college, I being a student learned details about this college. So let me present my opinion. Before the conduction of our first semester, we had a grand organized induction program where we were introduced to some notable speakers who guided us in the path of education and also taught us about some skills



like how to increase our intuition power, basics of acting, meditation, etc. I am a student of Data science in this college which I believe to be the best department and or HOD is a friendly and humble person. Education consists of lecture sessions combined with labs and workshops which makes us practical and skilled. The professors are interactive, helpful and supportive as they clear us doubts, guide us and also, we can always expect help from them whenever we are writing a paper or making a model. Not only do they provide all facilities for us education but they also welcome extracurricular activities with open arms by housing BCREC Music Club and Sports Club. Due to its growing popularity many students come from outside West Bengal to study here. Thus, we get friends from various diversities making it look like a rainbow community. BCREC also houses a library where students can approach whenever they want reference books or want to learn something extra. I will conclude my opinion on BCREC by saying that I am proud of this college. This is probably a gateway to us bright future. It provides with the most supportive role for the student's success. Thank you for listening to my opinion.

Written By:
SANDIPAN ROY CHOWDHURY
3rd year

SCRUTINIZING SECRETS OF THE COSMOS

Reason behind big bang:

The inflation theory proposes that a patch of repulsive gravity material existed in the early universe. For inflation at the grand unified theory scale ($\sim 10^{16}$ GeV), the patch needs to be only as large as 10^{-28} cm. Since any patch is enlarged fantastically by inflation, the initial density or probability of such patches can be very low. {1 GeV = Mass energy of a proton}.

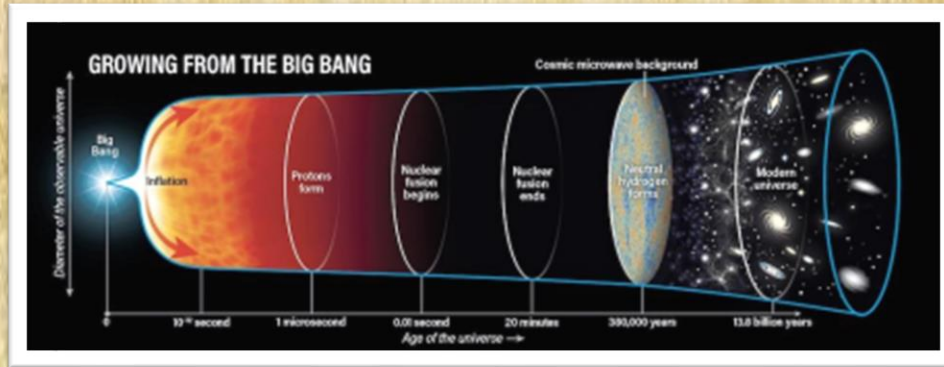
The gravitational repulsion created by this material was the main driving force behind the big bang. The repulsion drove the patch into an exponential expansion, doubling in size every 10^{-37} sec or so.

The patch expanded exponentially by a factor of 10^{28} , but it could have expanded much more. Inflation lasted for maybe 10^{-35} seconds and at the end, the region destined to become the presently observed universe was about the size of a marble.

The repulsive gravity material being unstable, decayed like a radioactive substance. It ended the process of inflation. The energy released by the decay produced ordinary particles, forming a hot and dense primordial soup. Standard cosmology came into picture. Although the patch expanded in volume, density of this repulsive gravity material was not lowered. From here, we can infer that more and more mass/energy appeared as it expanded in volume. It does not violate the law of conservation of energy for reasons explained below.

Evidence for inflation:

1. **Large scale uniformity:** The cosmic background radiation temperature is uniform to one part in 100,000. It was released when the universe was about 400,000 years old. In standard cosmology, without inflation, a mechanism to establish this uniformity would need to transmit energy and information at about 100 times the speed of light. Then inflation stretches the region to be large enough to include the visible universe.



2. Flatness of the space time fabric: Before moving on, a common misconception regarding flatness is that it denotes 2 dimensional. Here flat does not mean two dimensional. Flat means Euclidean as opposed to the non-Euclidean curved spaces that are also allowed by Einstein's general relativity. 3 dimensional curved spaces are hard to visualize, but for time being, we just have to know that they are analogous to the 2-dimensional curved spaces.

According to general relativity, the flatness of the universe is related to its mass density:

$$\Omega \text{ (Omega)} = \frac{\text{Actual mass density}}{\text{Critical mass density}}$$

Critical mass density

Critical density depends on expansion rate. If $\Omega = 1$ it is flat, if $\Omega > 1$ it is closed and if $\Omega < 1$ it is open. A universe at the critical density is like a pencil balancing on the tip. If Ω was slightly below 1, it would rapidly fall to zero and no galaxies would form. If Ω was slightly greater than 1, it would rapidly rise to infinity, the universe would re-collapse, and no galaxies would form. To be as close to critical density as we measure today, at one second after the big bang, Ω must have been equal to one to fifteen decimal places. Now the question arises why was it equal to 1 rather than being 2 or 3 or any other number? Well, it is totally possible that firstly it can take on any random value and then due to inflation it became almost equal to 1.

In 1998, it was discovered that despite so much of gravitational pull being present in the universe, the rate of expansion of universe is being accelerated and it has been accelerating for the past 5 billion years. Since, no observations yield to a satisfactory result, scientists put the blame on "dark energy". Small scale non uniformity: They can be measured in the cosmic background radiation. Although, the intensity is often uniform across the sky, there are these small ripples in about one part in 100,000. To answer the question where do they come from, inflationary model plays a crucial role. Inflation attributes

these ripples to quantum fluctuations. Inflation makes generic predictions for the spectrum of these ripples i.e., how the intensity varies with wavelength. The data measured so far agrees beautifully with inflation.

Universe to Multiverse: By now, we know that the repulsive gravity material is metastable. In any one particular location, the probability of remaining in an inflating state decrease exponentially with time. But in any successful model of inflation, the universe is expanding exponentially. As a matter of fact, the rate of exponential expansion is faster than the rate of exponential decay. Therefore, the volume of the inflating material increases with time even though the inflating material is decreasing. The inflation becomes eternal- once it starts, it never stops. The inflating region never disappears, but pieces of it undergo decay and produce “pocket universes” (our universe was created in this way). Thus, instead of one universe, inflation produces the Multiverse.

Dark energy: Key mystery of the universe

In 1998, astronomers discovered that the universe has been accelerating for the last 5 billion years (out of the 14- billion-year-old history).

Implication: Inflation is happening today, so the universe today is filled with a repulsive gravity material. We know, within general relativity, it requires negative pressure. The repulsive gravity material which apparently fills the

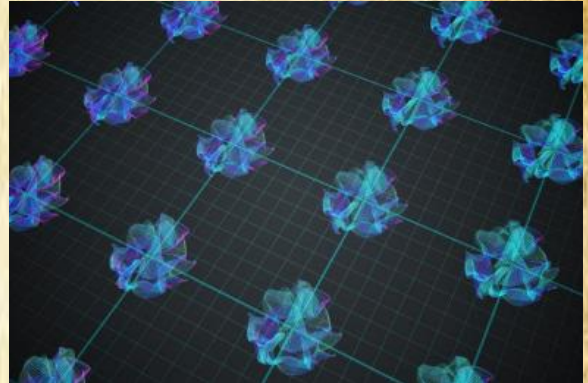
space is known as dark energy. The simplest explanation of dark energy by far is that dark energy=vacuum energy, also known as a cosmological constant. The quantum vacuum, unlike classical vacuum is far from empty, so a nonzero energy density is no problem. In quantum field theory, energy density of quantum fluctuations diverges. All wavelengths do contribute and



there is no particular shortest wavelength. A plausible cut off for the fluctuations is the Planck length; 10^{-33} cm- the scale of quantum gravity. Using this cut off, the estimated vacuum energy density is too large.

The landscape of String Theory:

To merge quantum mechanics to the general theory of relativity, potentially paving the path for a unified theory. The name comes from the modelling of subatomic particles as tiny one-dimensional string like entities rather than the more conventional approach in which they are modelled as zero-dimensional point particles. According to this theory, a string undergoing a particular mode of vibration corresponds to a particle with definite properties like mass and charge. One of the many vibrational states of the string corresponds to the graviton, a quantum mechanical particle that carries the force of gravity. Thus, string theory is a theory of quantum gravity. Since the inception of string theory, scientists have sought to find the vacuum of string theory – with no success. Within the past 10 years or so, string theorists have come to the belief that there is no unique vacuum. Instead, there may be 10^{500} long lived metastable states, any of which could serve as a substrate for a pocket universe. Eternal inflation can produce an infinite number of pocket universes of every type, populating the landscape of string theory. Although string theory would govern everywhere, each type of vacuum would have its own low energy physics – its own “standard model”, its own “constants of nature” and its own vacuum energy density.



Written by:

DEBANGAN MUKHERJEE

3rd year

CAN FOOTBALL HELP BOTH PHYSICALLY AND MENTALLY??

Football is a sport where you get rid of many things physically and mentally. This sport is such an aggressive sport which teaches one who plays what is the meaning of a team, what is the meaning of brotherhood, what outrageous potential one has which can be evolved. This sport has no discrimination on physique no discrimination on caste or anything, it clearly shows how one keeps his/her dedication towards their hard work, technique, discipline and obsession with the sport. Many at this stage do not have a good mental stage but while giving yourself to this sport, one would forget all the voices going in their head, one would evolve himself/herself under frustration, while one would explore themselves till the end. QATAR WORLD CUP 2022 CHAMPION LIONEL ANDREZ MESSI, at beginning of his career was not spotted because coaches thought him to be short-height equals low potential.



But his grandmother insisted him to play under a local coach, from there he showed everyone that height is just a factor not outcome and made his grandmother proud. One of the GOAT CRISTIANO RONALDO made himself scribed in the history of football and made his father proud having so much talent and discipline. These players help us realize and also inspire us that

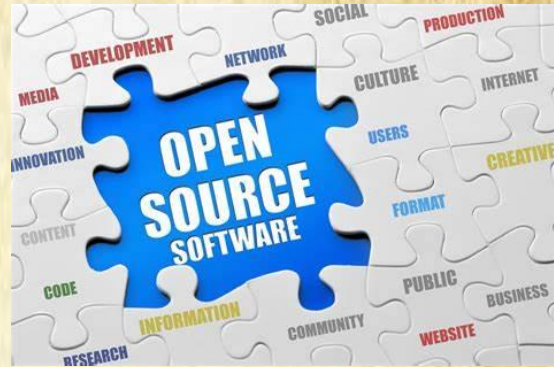
when you lend yourself towards this sport, one would get to know how this sport would turn themselves towards discipline. When you would be playing an official or unofficial match those 90 minutes would be you dream of the day, how would you perform, how will you help yourselves and help your team. It's here where you will learn to treat your coach as GOD, it's here where you will have dreams to handover the trophy to your parents, it's here where your main opponent is yourself, it's here where you will be fighting till you reach your potential. That's why the caption is mentioned as" Football helps physically as well as mentally". Many players like Benzema, Suarez, Ramos, Martinez and many others the way the dedicated themselves for their country makes you more hunger to find and do your best.

Written by:
SAYAN ADHIKARY
3rd year

OPEN SOURCE

Open-source software refers to any software whose source code is freely available for anyone to access, use, modify, and distribute. This means that anyone can take an open-source project and modify it to suit their needs or add new features. This is in contrast to proprietary software, which is owned by a particular company or individual and is usually closed off from outside modification.

Open-source contribution offers several advantages, some of which are: Skill development: Contributing to open-source software allows developers to improve their coding skills and gain valuable experience by working on real-world projects.



1. **Collaboration:** Open-source projects are typically collaborative efforts involving developers from around the world. Contributing to an open-source project provides an opportunity to collaborate with other developers and learn from their expertise.
2. **Resume building:** Open-source contribution can be a great addition to a developer's resume, as it demonstrates their ability to work on real-world projects and collaborate with others.
3. **Recognition:** Open-source contribution can lead to recognition within the community, as developers who make significant contributions are often acknowledged and praised.
4. **Impact:** Open-source software is often used by millions of people around the world, and contributing to an open-source project allows developers to make a real-world impact by improving the software that people use every day.

Open-source contribution competitions:

There are several popular open-source contribution competitions that encourage developers to contribute to open-source projects. Here are a few examples.

- **Google Summer of Code**
- **Hacktoberfest**
- **GitHub Game Off**
- **OpenHatch**
- **Mozilla Open-Source Support (MOSS) awards**
- **Outreachy**

Google Summer of Code:

Google Summer of Code (GSoC) is a global program that provides students with a stipend nearly 250000 INR to work on open-source projects over the summer. Students are matched with mentors who guide them through the development process and provide feedback on their work. At the end of the summer, students present their work to the community and receive a certificate of completion.

Hacktoberfest: Hacktoberfest is an annual event sponsored by Digital Ocean that encourages developers to contribute to open-source projects during the month of October. Participants who make at least four pull requests to any public repository on GitHub receive a limited-edition t-shirt. Hacktoberfest is a great way for developers to get started with open-source contribution and make valuable contributions to projects.

GitHub Game Off: GitHub Game Off is an annual game jam that encourages developers to create open-source games using GitHub. Participants have one month to create a game and can win prizes for their efforts

Mozilla Open-Source Support (MOSS) awards: The Mozilla Open-Source Support awards provide financial support to open-source projects that are critical to the health of the Internet. Projects are nominated by the community and evaluated based on their impact and need.

OpenHatch:

OpenHatch is a non-profit organization that helps new contributors get involved in open-source projects. They offer a range of resources and tools to help developers find projects to contribute to and get started on their contributions. OpenHatch is a great resource for developers who are new to open-source contribution and are looking for guidance and support.

Outreachy:

Outreachy is a program that provides paid internships to people from underrepresented groups to work on open-source projects. The program is designed to help participants gain experience and skills in open-source software development and make valuable contributions to the community.

Outreachy internships last for three months and are available twice a year. Participants work remotely with a mentor from an open-source project to complete a project that aligns with the goals of the project. Participants receive a stipend of nearly 48,000 in for the duration of the internship.

Overall, these open-source contribution competitions and programs provide valuable opportunities for developers to gain experience, learn new skills, and make meaningful contributions to open-source projects.

CONCLUSION:

Open-source software has become an essential part of modern computing, and contributing to open-source projects is a great way to improve your skills, give back to the community, and make a meaningful impact on the world.

WRITTEN BY:
SANTI SINGHA
3rd year

TEAM ALPHA03

Losers can be Winners...

This is a short story about the winner of Science Exhibition 2023 of DR. B.C. Roy Engineering College and the third prize winner of Tantraja 2023 of DR. B.C. Roy Polytechnic College.

It all started with the class of Basic Electrical Engineering of DR. Dola Sinha ma'am when she selected me (Shubham Kumar), Bidisha for her project to work on.

We used to go there to understand the project and think of the solution of the problem in the project. In that project, I came to know about Peltier module and its properties. But due to Semester exams we stopped working for days.

After some days of semester exams there was an announcement that science exhibition was being going to be held on 1 March. Dola Ma'am contacted the team members of the recent project. Along with me and Bidisha, Souvik of AI/ML was also there in the project. She told us to make a project using Peltier to present on Science Exhibition in 8 days.

8 Days before exhibition

The team was made. Me, Bidisha and Souvik were the members. Dola Ma'am told us to think about an idea about project. At the night I came up with an idea that we could make a freezer. We will make ice-cream and will serve to judges. Ma'am said other team members to think about more ideas.

No other idea came for 4 days.

4 days before exhibition

Two of the team members exited the team. I added two more members of Data Science department Naming Shovan Kundu and Harsh Sharma. It took 2 days to gather up the parts of our Freezer.



2 Days before Exhibition: We worked all night till 3 am. We were able to make the outer structure of the freezer. After that we were so excited and decided the team's name before the completion of model. Our team's name is Alpha03.

1 day before exhibition: We were not sure that our model is going to be completed or not. We tested for model but it was unable to make ice due to lack of Peltier so we decided to make cold coffee inside it and it went well. All of the team members worked so well and we finally completed our model. Our model's name was Green Energy based Mini freezer. Which can also run on solar panel and can be carried anywhere due to its small size? Everyone was saying that we would not win any prize as there were many better models than us.

The Day of Exhibition:

There was a tough competition. We started explaining our model to judges and gave them cold coffee which we made inside the freezer. After the Exhibition we thought to get third prize according to our performance but it was someone else who got it. I was upset because second prize was also not for us. But the judges had decided first prize for us. As soon as we heard the Winner, the team Alpha03, we were so full of joy. The prize hasn't been disturbed yet.



On 2 March we went to the tech fest of DR. B.C. Roy polytechnic College to present our model. We got good competition with the seniors and we won third prize in the event. We want to thank our HOD Chandan Bandyopadhyay sir, Sovan Bhattacharya sir and Dola Sinha ma'am for supporting us throughout the project. We also want to thank the God.

**WRITTEN BY:
SUBHAM KUMAR
3rd year**

EVOLUTION OF INDUSTRY AND INDUSTRY 4.0

The evolution of industry has been a fascinating journey that has taken us from the first industrial revolution in the late 18th century to the present day. Each revolution has brought about significant changes in the way we manufacture goods and produce services. The first industrial revolution was characterized by the use of steam power and mechanization. This revolution saw the development of new machines that could perform tasks faster and more efficiently than humans. The second industrial revolution, which took place in the late 19th and early 20th centuries, brought about the introduction of mass production and assembly line techniques. This revolution saw the introduction of new materials such as steel, and the development of new manufacturing

processes such as the Bessemer process. The third industrial revolution, also known as the digital revolution, began in the late 20th century with the introduction of computers and the internet. This revolution saw the integration of information technology into the manufacturing process, allowing for greater automation and control. Now the fourth industrial revolution, also known as Industry 4.0 builds on the foundations of the



previous revolutions and takes the integration of technology even further. The term "Industry 4.0" was first used in 2011 at the Hanover Fair in Germany. The term was coined by a group of representatives from the German government, academia, and industry. Industry 4.0 is all about using data and advanced analytics to optimize the manufacturing process. It is a combination of emerging technologies, such as the internet of things (IoT), big data, artificial intelligence (AI), and machine learning, that aim to automate and streamline the manufacturing process. Industry 4.0 is transforming the way products are designed, produced, and delivered, leading to more efficient and sustainable production processes. Industry 4.0 is still in its early stages, but it is already having a significant impact on the manufacturing industry.

The key components of Industry 4.0 are the following:

The Internet of Things (IoT) - IoT is a network of connected devices that collect and share data. In Industry 4.0, IoT devices are used to monitor and control manufacturing processes, providing real-time insights into production.

Big Data - Big data refers to the massive amounts of data generated by the

manufacturing process. With Industry 4.0, this data can be analysed in real-time, allowing manufacturers to identify and address issues as they arise.

Artificial Intelligence (AI) - AI refers to the ability of machines to perform tasks that typically require human intelligence, such as decision-making and problem-solving. In Industry 4.0, AI is used to automate and optimize manufacturing processes.

Machine Learning - Machine learning is a type of AI that allows machines to learn from data and improve over time. With Industry 4.0, machine learning algorithms can be used to optimize manufacturing processes and reduce waste.

The benefits of Industry 4.0 are numerous. By leveraging digital technologies, manufacturers can reduce costs, improve quality, and increase efficiency. The smart factory allows for real-time monitoring and control of manufacturing processes.

However, Industry 4.0 also presents new challenges. One of the primary challenges is the need for skilled workers who can design, implement, and maintain these new technologies. In conclusion, Industry 4.0 represents a significant transformation of the manufacturing industry. By leveraging emerging technologies, such as IoT, big data, AI, and machine learning, manufacturers can create smart factories that optimize production and reduce waste.

WRITTEN BY:
SOUJATYA BANERJEE
3rd year

12th FAIL:

A movie full of emotions, strengths, dreams and aspirations

At a time when the moral compass of Bollywood films resembles a roulette wheel, here comes an inspirational tale that truthfully celebrates probity in public and private life. Returning to the turnstiles after a while with a story of hope and resilience, filmmaker **Vidhu Vinod Chopra** maps how a worthy son of the soil, a species that is becoming endangered in the cinematic landscape, overcomes poverty and corruption to negotiate the toughest exam of the country. The tone is a bit didactic and the treatment gets a tad overstated but it is a big-hearted film that hugs you tight with its message of human goodness, that will make you cry, laugh and enjoy at the same time.

A must to watch movie for every aspirant, based on a real-life character, a guy from Chambal who doesn't pick up the gun when his father is punished for his honesty. He doesn't turn hostile when the local MLA stalls his wheels when he and his brother try to eke out a living. Instead, drawing inspiration from an upright police officer (**Priyanshu Chatterjee**), Manoj Kumar Sharma (**Vikrant Massey**) wields a pen and learns to write his own destiny in the allotted time so that he can also don the uniform and deliver the elusive justice. In times when trust is in deficit, Manoj finds friends and benefactors who help him "TO WIN" in the game of snakes and ladders, as one of the seasoned aspirants rightly describes the much sought-after exam. During time of struggle and peak competition among aspirants Pritam Pandey (Anant V Joshi) offers him food and shelter and introduces him to the UPSC challenge. Not to forget the unwavering support of mentor Gauri bhaiya (Anshuman Pushkar) as the failed aspirant who helps create a ladder for Manoj to realise his dream



In the words of writer Anurag Pathak, "jo umra hamari padhai karne ki hoti hai, wohi umra hamari pyaar karne ki bhi ho jati hai" Manoj was also not an exception in that when he comes across Shraddha Joshi ([Medha Shankar](#)), but as said by wise people it's completely depends on you, whether to make that Love your power or weakness, using it to create yourself or to destroy. Being a trained doctor, Shraddha not only prevented the class barrier to come in between their pristine love but also helped Manoj in every step of life starting from giving sample papers, books to shaping out a complete gentleman in him.

It's a complete struggle story of aspirants who want to achieve his/her success at any cost. It teaches us no matter from where you are, what's your condition, but still, you can win.

The film employs former Prime Minister Atal Bihari Vajpayee's poem [Haar Nahin Manooga](#) (Won't Give Up) to lyrically convey its point and most important, the core message of movie is of getting up after failure and starting again: **#RESTART**

So according to me it's a complete 5 on 5 star's rating movie, go and enjoy it if you haven't watched it till now.

WRITTEN BY:
TANMOY SURAL,
2nd year

Poker game - A short story

Do You Play Poker? No One Is Dealt a Perfect Hand

A young man was playing poker with six of his friends. Now this young man did not have a vast amount of money but wanted to play anyway so he threw a quarter of his money in the pot. When the dealer dealt his cards, he noticed he had the worst possible hand - a high card. Since he had put a quarter of his money in the pot already, he reasoned



that he would do what he could to come out victorious. This young man knew what he was doing and did not even glance at any of the other six players. When the opportunity arose to swap all of his cards he tactfully refused and kept his seemingly worthless hand. Now, when the time came to throw in more bets, this young man put in another quarter of his earnings. Because three of the other six observed that he never changed his cards, they assumed he had a great hand so they immediately folded and withdrew whilst the remaining three called and threw in some of their money.

Knowing that there were still three players left, he decided to put all his money in the pot. This frightened the last three and they folded. This young man came out victorious and now had ten times the amount he began with. When his six friends asked him to show them his hand, he threw his cards on the table revealing the lowest hand. After a brief pause the young man stated: "I knew I was going to win because the cards don't matter in poker, it is the trick of leading your opponent to believe you have an unbeatable hand ". This is not to say we should bluff our way through life, rather we should use what we have to be the best we can. In life, no one is dealt with a perfect hand. Some are just dealt with higher cards and some will choose to try and change those cards. If you want to win in anything, remember that your hand is only as strong as your will and determination. Put in all your talents and never focus on what another person has because you will just be more disappointed in the end. Your life is in YOUR hand.

WRITTEN BY:
ANANYA MUKHERJEE
2nd Year

POETRY



REUNION

The Reunion taught me,
How people come with many layers,
and told me why we should never judge
a book by its cover.

The topper of the class,
Is a happy homemaker.

Back bencher of the lot,
Is an amazing entrepreneur.

One who bunks all the classes,
Is a well known and honest politician.
The flamboyant fashionist of the class
became a dreaded lawyer.

The one who failed in maths paper,
is now a renowned fashion designer.
And the one who often got to stand outside the class
Is a respected army officer.

Each child out there has a different success story.

The Reunion taught me ,
How people come with many layers,
And told me why should we never judge
a book by its cover.

- SUPRIYA
3rd year

॥ एहसास ॥

सुनहरी किरणों में नमी से बेहती ये हवाएं,
जिंदगी में कुछ कमीसा एहसास कराती हैं। कुछ पल यूं
ही थम जाने को कहती हैं ।

सुबह की ताज़ी हवाओं में ये चिड़ियों के पैगाम,
थोड़ी आलस बिस्तर पर छोर देने को कहती हैं। ढलती
शामों में डूबते ये सूरज,

किसी संकट में भी मुस्कुराने को कहती हैं। रातों में ये
टिमटिमाते तारे,

तारों के भीड़ में भी चमकने को कहती हैं।

जिंदगी की ये दौर फिर भी क्यूं दौड़ते रहने को कहती हैं !!

- MADHAV RAJ
3rd year

A SECRET

A secret held within my heart so deep,
A story that I promise to forever keep.
A treasure trove of hidden thoughts and fears,
Brought to life in the quiet of my tears.
This secret whispers softly to my soul,
In the darkness, it's the only thing I know.
It keeps me company in my solitude,
A whispered breath of hope when all is crude.
This secret is a bond that defines me,
A map to my soul I'll always see.
It is my joy amidst the deepest pain,
A magic spell that moves around my veins.

Someday, maybe I'll find the
courage to share,

This secret, this cherished piece of care.
Until then, it remains my passionate treasure,
In the everlasting pearl of my heart forever.

- **DITSHA GHOSH**
3rd year

THE BROKEN GLASS

Broken pieces of glass

Cannot be turned into a sand hour glass-

Keeping you informed of the time

we have spent together.

But the grave on which -

all the memories have been cherished

Turned into a bewildered horror;

To make a conclusion on the superstitious belief

of the upcoming circumstances ----

We have been together for a long time ;

But you said we can't be together

for our paths to be different.

Now your spirits are haunted

To which you have felt

something for yourself ;

But the pieces pricking into your palms

And the blood came out of the pain ,

Makes you remember of the day you left me ...

The pieces once broken

Cannot be turned into something beautiful

Which were once in your hand ...

But the change will subtle you to regret.

BIDISHA HAZRA

3rd year

THE CIRCLE OF LIFE

A child stumbles on his feet 10 people rush to help him,
The father picks him up.

The mother checks his shin for injury.

A teenager stumbles on his feet weighed down by expectations
burdened with assignments and college worry.

Expected by parents to be the best and taunted by the weight of it all.

He just celebrated his 21st birthday with only two friends,
learning a hard life lesson that not everything lasts until the end.

A young adult he is or so he thinks,

Learning to manage household budgets and chores
figuring out everything on his own.

He learns that staying away from home is not so fun
and getting married is a lot of hassle.

Aging like a fine wine

nearing retirement looking at his family and beloved wife.

He thinks life was fair enough and his complaints stop
as he has better things to do than sit and mop.

On his deathbed,

surrounded by familiar faces remembering the lessons
he learned in his life.

He looks at his granddaughter,

the same age when he began resenting life for all its reasons.

He wants to tell her not to do the same, but stops,
knowing that lessons are best learned through experience,
and that is what makes all the difference in each individual's life.

- MUSKAN SINGH

3rd year

॥ कठपुतली ॥

यादों के गुलदस्ते को आज फिर से छेड़ा,
उन गलियों में फिर से मुड़ कर देखा ।
वही शाम, वही सवेरा,
बस कुछ मुरझाए से पत्ते और दरार वाली दिवाले ।
वो बचपना और वो टूटे शीशे,
में दूर चलता गया बस जिंदगी के पीछे ।
बारिश की बूंदों में कागज़ के नौका सा मजबूर चला,
नदियां में सूखे पत्ते सा मशगूल चला ।
चलता चला गया मैं उस छोर तक,
बंधता चला गया मैं उस डोर से ।

- **MADHAV RAJ**
3rd year

Hypoesthesia

**When you lose something,
Something vintage yet precious,
But now you're worn out,
Your eyes can't discharge anymore.
The sensation of losing is there,
But you can't feel the grief,
You can feel the pain,
But you don't want to stop anymore.
Now it's time to forget,
And move forward in your busy plan,
You've gotten things to do,
So, you can't wait anymore,
Once I waited a lot,
I invested more than I could,
But the return was null,
So, I can't go back anymore,
But suddenly found a new torch,
A new story to unfold,
Now I've to grow and advance by it,
So, I can't repeat my mistakes anymore.**

**- SOHAM MANDAL
*3rd year***

MEMORIES AND ME

Leaves are falling, apart from the tree.

Like you are walking far away from me.

One by one, slow and slow each leaf losing its glow.

Why the tree is doing so? Is there any compulsion he doesn't show?

Each leaf knows everything, once they were tree's fairy king.

I know the tree is unwilling to lose the leaf, his darling.

But tree knows that nature is cruel.

He is not able to preserve its jewel.

Can't the tree fight with nature?

Or the tree is too mature?

Tree has accepted the myth.

He will lose the leaves he has loved with

and the leaves will lose the tree's girth.

Tree is baby but acting like mature

At last, he chooses to respect the nature.

He will break leaves' heart into many pieces apart.

Leaves will never forget the tree that has left them in misery

Tree will get new leaves.

Leaves will not get new tree.

- SUBHAM KUMAR
3rd year

The Mangrove-Faunal Genetic Paradise

In a scenic sunrise from mighty river Matla
Exploring the peace in between world of delta,
A boat ride of Sundarban along with shiny ray
Mangrove whistler enchanting the colourful Bay.
The downy woodpecker holding the Sundari pile
The kingfisher driving with salt water crocodile,
Mind waiting for the swimmer of paradise in flame
For their glorious yellow-black combined frame.

Small translucent waves striking the bow
Snakes hiding inside the mangrove row,
Deer moving to their warm hidden cave calmly
And the enthusiastic boat floating with bravery.
Majestic frogs croaking to enjoy the rain
Creating an ideal place to escape the pain,
The Moon peeking through the fragile leaves
Clearing the destiny by the unknown relieves.
Mangrove roots from the silence of water
Showing the direction for handle a matter,
Wildness of wind cooling the thoughts like hive
And eyes searching for the meaning of fauna life.

- **ISHITA GOSWAMI**
3rd year

हम सब चोर है !

पुराने जमाने की बात है। एक आदमी को अपराध में पकड़ा गया। उसे राजा के सामने पेश किया गया। उन दिनों चोरो को फांसी की सजा दी जाती थी। अपराध सिद्ध हो जाने पर इस आदमी को भी फांसी की सजा मिली। राजा ने कहा “ फांसी पे चढ़ने से पहले तुम्हारी कोई इच्छा हो तो बताओ। “

आदमी ने कहा “राजा जी”। मैं मोती तैयार करना जनता हूं। मेरा इच्छा है कि मरने से पहले कुछ मोती तैयार कर जाऊं।



राजा ने उसकी बात मान ली और उसे कुछ दिन के लिए छोड़ दिया। आदमी ने महल के पास एक खेत की जमीन को मोती की खेती के लिए चुन लिया। निगरानी के लिए वहा अधिकारी मौजूद थे।

खेत ठीक होने के बाद उसने राजा से कहा “ महाराज, बोन के लिए जमीन तैयार है, लेकिन इसमें बिच वही डाल सकेगा, जिसने तन से या मन से कभी ना चोरी की हो। मैं तो चोर हूं इसलिए मैं बिच नहीं डाल सकता। “

राजा ने अपनी अधिकारियों की ओर देखा। कोई भी उठकर नहीं आया। तब राजा ने कहा, “ मैं तुम्हारी सजा माफ करता हूं। हम सभ चोर है। चोर, चोर को क्या ही दंड देगा। हम सब ने कुछ न कुछ चुराया है। “

- ABHISHEK GHOSHAL
3rd year

DS Wallah

In the depths of the corporate hive,
Where data flows like a rushing tide,
The data science department thrives,
And never once will they subside.

With algorithms and models to spare,
They crunch numbers with skill and care,
Finding patterns within the noise,
Their insights sought by all the boys.

They predict the future with great ease,
And optimize with ruthless glee,
Their work is vital to success,
And all within the company confess.

So let us honor these data wizards,
Who sift and sort the ones and zeros,
For without their diligent efforts,
Our future would be much less clear.

- **RITIK MAITY**
3rd year



সফলতা

Existence with a meaning

This world can be a better place to live in;
If you can fit with the ebb and flood of the wave,
Still, you are mugged up with the thoughts
Of drowning and rising up-
Without living the moment;
This world will not make you fit into it
but you will fit yourself into it,
and you have to.

One will judge, another will speak behind your back;
One will criticize, another will objectify;
Raising questions regarding your work, your fault, your
decisions, your positivity and your success.
Still, this creates a moment for you
to struggle for existence;
And to know that people will be always on their motive
To gossip about you-
Is what makes you sure
that you are following the right way of your life.

- **BIDISHA HAZRA**
3rd year

I am তো অবাক

নিশি রাতে জেগে দেখি গাছের ডালে বসে আছে কাক

I am তো অবাক।

চোর ঢুকেছে ঘরের ভিতর দরজা ছিল ফাঁক

I am তো অবাক।

মোবাইল নিল, টিভি নিল,
রিমোট না হয় থাক,

I am তো অবাক।

সব মালামাল বস্তায় ভরে

চোর পালালো চুরি করে

I am তো অবাক।

মধ্য রাতে কুকুর ডাকে

শিয়াল দেয় হাক

I am তো অবাক।

হয়নি রাতে তেমন কিছু

কোন ভুত নেয়নি পিছু

বেঁচে গেছি যাক

I am তো অবাক।

সকালে দেখি পুরো পাড়ায়

চোরটা নাকি পড়েছে ধরা

চোরের মাথা টাক

I am তো অবাক।



- SOURAV BASU

3rd year

BROKEN MIRROR

I've got a secret that I needs to tell,
Everything I touch it ends in fail.
Alone and sad I sit by the sea side,
Cries, yells and fixes my mind.

There are times,
In all of us our lives.
When we fail as a beginner,
And come out as a strong individual.

Somehow I have to put an end to it,
And will find a way in doing it.
I wait and wait for failure to die,
And want success to be my bride.

SUPRIYA

3rd year

CARS

Cars, cars, speeding by,
Rushing on highways, passing us by,
Engines roaring, wheels spinning fast,
A symbol of progress, built to last.
From vintage classics to modern designs,
Cars have come a long way in time,
They take us places near and far,
Making journeys swift, simple, and bizarre.
Some cars are sporty, sleek and fast,
Others are large, sturdy and vast,
But they all serve the same purpose,
To take us on our journeys, without a fuss.
Cars are more than just machines,
They are symbols of our dreams and means,
Of achieving freedom and independence,
Of exploring new places with confidence.
So, let's cherish our cars, old and new,
For they are more than just metal and glue,
They are companions on our journey through life,
Making the road ahead less rife.

- ABIR PANDA
3rd year

Me & myself

Yo. What you doing?
Looking at the mirror.
Weirdly drooling.
You know right?
That you ain't the best,
Yes i know but I ain't stopping with no rest.
I'm the god of my game. I'm the ruler of my realm.
I give no thoughts to shame.
With myself i'm overwhelmed
Yeah i got many pearls and they do let me lead,
But only someone special
I do really need.
I'm a free spirit, Lemme just fly.
If you wanna cut my wings,
You're welcome to try!
Now i know who i'm.
And the worth thyself,
If you wanna leave, please do!
Cause i'm fine with me and myself.

- SOHAM MANDAL
3rd year

IS THAT ALRIGHT?

Feeling like a living corpse walking in a motion
I am such a kind of person who just hates the commotion,
Even if you took my smile and killed all emotions
I would still drink your poison thinking it as a potion.

My heart is clear and big as an ocean
but you broke it into pieces with a bloody explosion,
I am still speechless with your act and notion
and hope you are happy with this situation.

I have again lost against myself in the fight
and now I want to gift my soul into the arms of the night,
so that I don't have to face the warmth of the light because
I have no strength left behind to decide between wrong and right.

I also threw my pen as I was unable to write and
even broke my brushes which turned everything into
the mixture of black and white.

Also, I can see my dress drenched in the blood from my hands
and I don't feel anything now.

Is that alright...

DEBOJYOTI CHATTERJEE

3rd year



UNDER THE HARVEST MOON

**Under the harvest moon,
When the soft silver
Drips shimmering
Over the garden nights,
Death, the gray mocker,
Comes and whispers to you
As a beautiful friend
Who remembers?**

**Under the summer roses
When the fragrant crimson
Lurks in the dusk
Of the wild red leaves,
Love, with little hands,
Comes and touches you
With a thousand memories,
And asks you
Beautiful, unanswerable questions.**

**- ADRIJA BANERJEE
2nd Year**

THE DAY

**It clears. And the sun
throws light on the dust
on the windows, the**

**constancy of that
mist. To see "if the
weather is with us".
and it is.**

**It is amazing how much
a window lets in
or out. Part of a
cross from a tower
on a puddle on**

**a connecting walk,
white waterpipes that
side up sides of
white buildings to tie
tin cornices to
ground, other windows**

**polished by Indirections of reflections.
Quiet. The sky.**

ANWESHA BANERJEE

2nd Year

~ उम्मीद

तेरी आँखों में देख सपनो बुनने उम्मीद है..

तेरी जुबान से अब झूठ नहीं केवल सच सुनने
की उम्मीद है

मेरी खामोशी को तेरे शब्दों से पढ़ने की उम्मीद
है...

उम्मीद है मुझे तेरे साथ होने की तेरे संग सजदे की
उम्मेद है.....

ADITYA SINHA
2nd Year

ENJOY

EVERY MOMENT

An aerial photograph of a campus. In the center, there is a large, multi-story building with a light-colored facade and many windows. Below the building is a large green field, possibly a sports field or lawn. The surrounding area includes other buildings and trees. The text 'CAMPUS TOUR' is overlaid on the image in a bold, black, sans-serif font, enclosed in a black, hand-drawn style rectangular border.

CAMPUS TOUR



The institute is structured with well-furnished classrooms having the latest teaching aids. All classrooms are well lit and airy with spacious seating arrangements. The lights, sound, and air circulation make the room physically comfortable to support the teaching enterprise.

This is an essential and major facility for all technology learning institutions and BCREC has a superb reputation for excellence in equipment, instrumentation and workshops.



Facilities are upgraded continuously to keep abreast with the latest hardware, equipment as well as software and maintenance is of the highest order.



The institute provides staff, faculty and students access to the wireless network on campus everywhere...



The students enjoy a secured and peaceful atmosphere in the campus. They feel motivated to advance in their career when they find themselves in a disciplined campus. The law and order inside the campus is maintained by round-the-clock security and Institute's efficient Campus Administration.



BCREC has two auditoriums, namely the Nazrul Manch and a fully equipped modern AC-Auditorium named "Dulal Mitra Auditorium." Apart from that, the Institute also has one Seminar Hall named Albert Einstein Hall.

BCREC has well-ventilated accommodations for boys' and girls' students within the campus that emote a pleasant feeling and enhance learning. Hostels are managed by female Matrons (Girls' Hostels) and male Wardens (Boys' Hostels), under the



leadership of the Hostel Superintendent, Professor, apart from 24 hrs security provided in each of the hostel blocks. Each hostel offers complete facilities including boarding and lodging, common room, internet and Wi-Fi, room telephone service, etc.





ARTWORKS

&

PHOTOGRAPHY



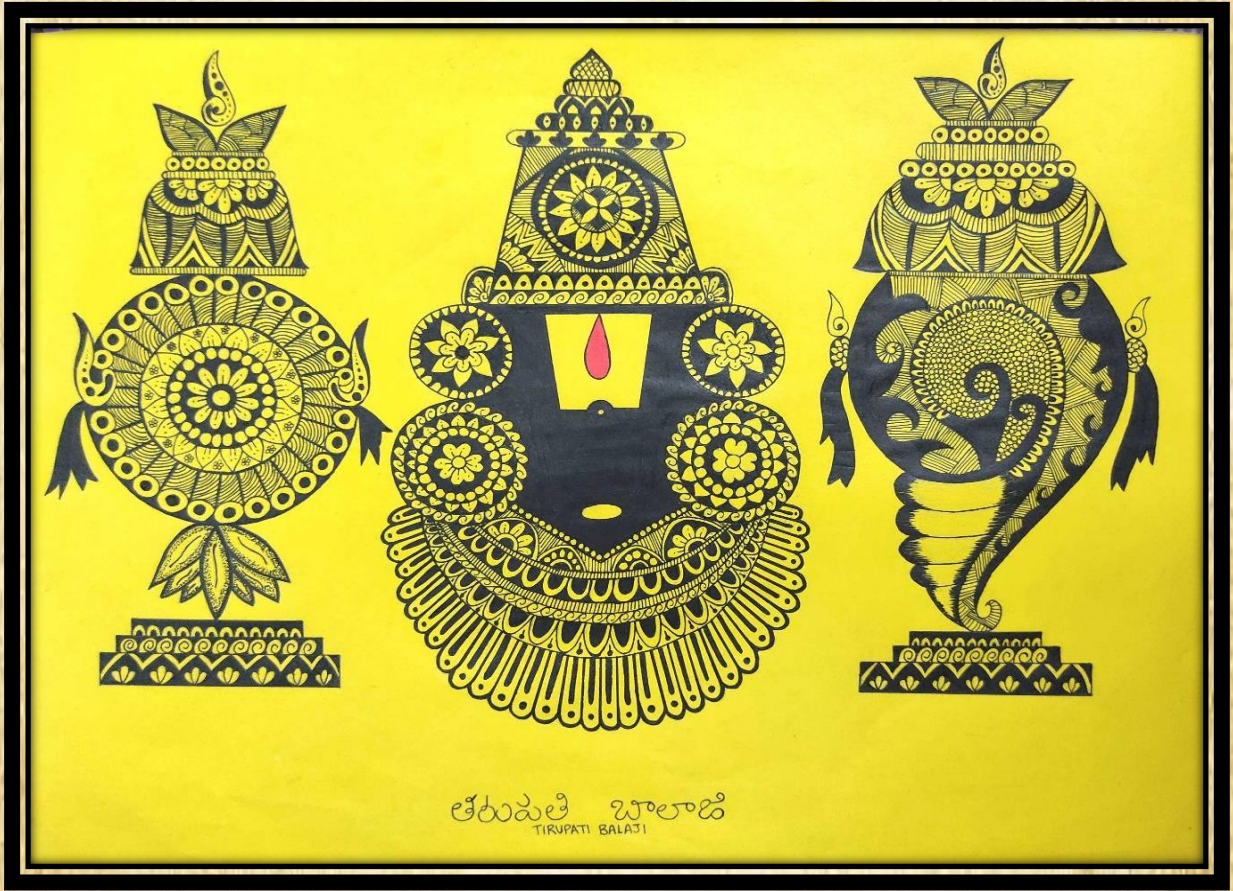
MANDALA ART

In the ancient Sanskrit language, mandala means a “circle.” A mandala is a geometric design or pattern that represents the cosmos or deities in various heavenly worlds. For hundreds of years, Tibetan Buddhist monks have made these cosmic diagrams out of coloured sand. They used to place each grain of sand intentionally using metal funnels and sticks. When they approached the centre point of the artwork, they experienced the transcendence of self and the reality of a universe in which all beings are free from suffering. Then, after days or weeks of labour, they practiced non-attachment and demonstrated the impermanence of all things by destroying the mandala. Mandalas came to Hinduism from Buddhism. Mandalas symbolize being one with life, going with the flow and reflecting inward.



VADDADI HEMA

3rd year



VADDADI HEMA
3rd year



VADDADI HEMA

3rd year



- **SHISHIR MAHATO**
3rd year



- **KINGSHUMAN ROOJ**
3rd year



PINAKI RANJAN SAHU –
3rd year



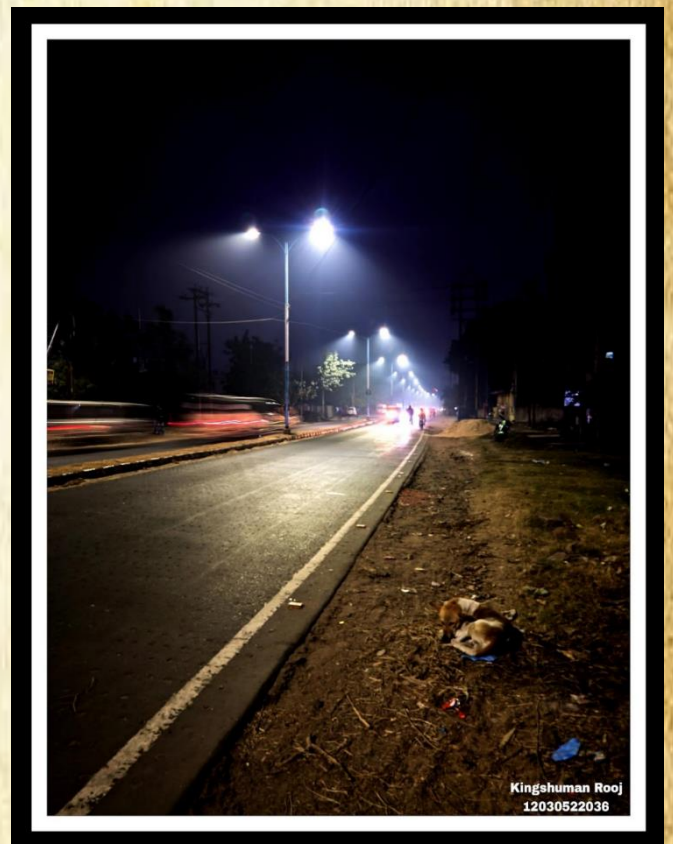
- SOHAM MANDAL
3rd year



- SATAVISA MOITRA
3rd year

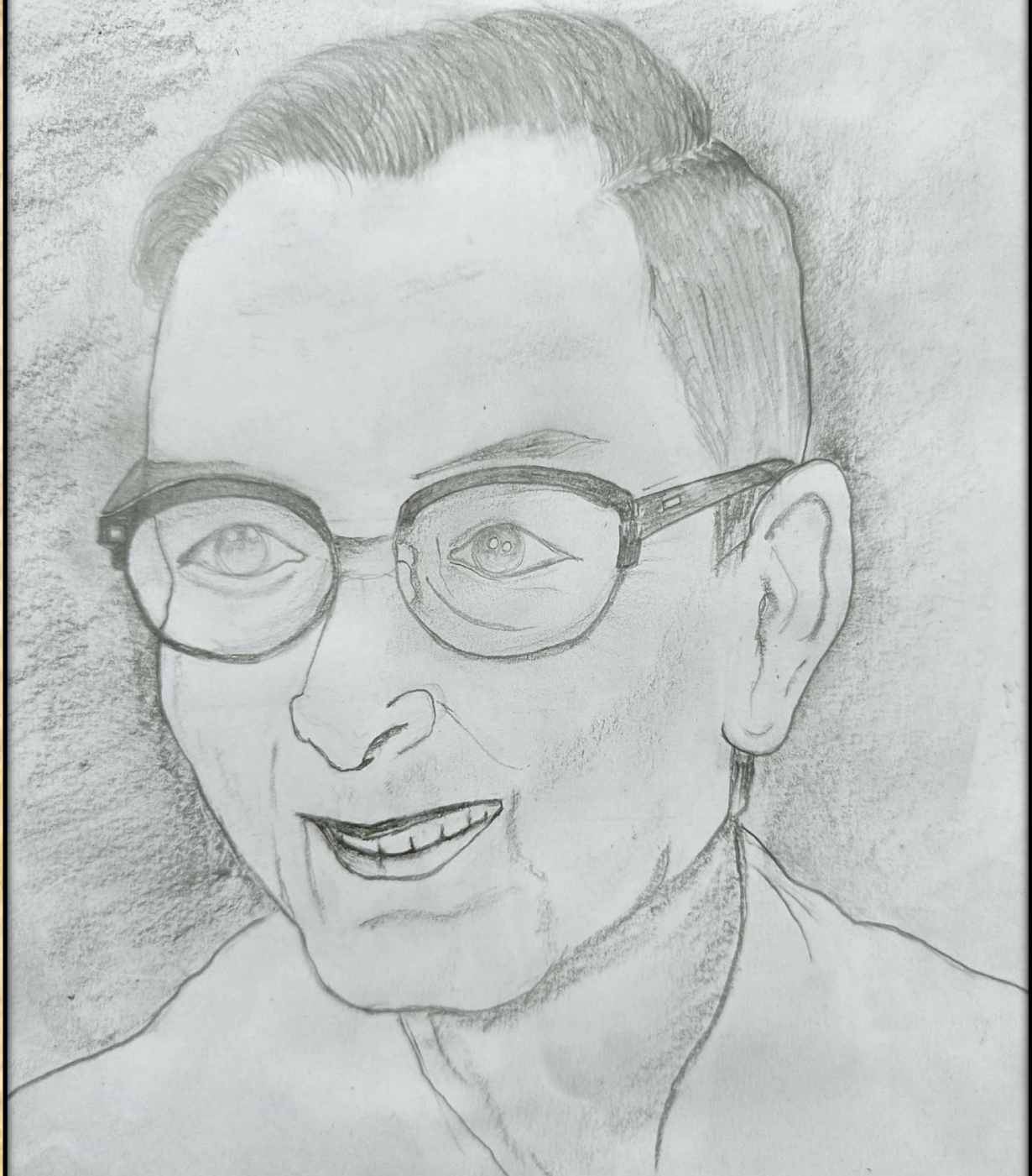


SHISHIR MAHATO -
3rd year



KINGSHUMAN ROOJ
3rd year





Dr. Bidhan Chandra Roy

- PROMISE NANDI
3rd year



ALAKENDU KUMAR
3rd year



- **MADHAV RAJ**
3rd year

© astom_mondal.16



ASTOM MONDAL
3rd year

SOHAM MANDAL
3rd year





SATAVISA MOITRA
3rd year



SWASTIK SEN
University roll no. :- 12030522035

SWASTIK SEN -
3rd year

RITIK MAITY -
3rd year



- DITSHA GHOSH
3rd year



BIDISHA HAZRA -
3rd year



KINGSHUMAN ROOJ

3rd year



AVIJIT BAURI

3rd year



SWASTIK SEN

3rd year





PINAKI RANJAN SAHU
3rd year

DIGITAL ART

Digital art refers to any artwork created using digital technology, such as computers, software, and digital tools. It encompasses a broad range of styles, techniques, and mediums, including 2D and 3D graphics, animation, video, virtual and augmented reality, and interactive installations.

One of the most significant advantages of digital art is the ability to create and manipulate artwork in ways that were previously impossible or extremely challenging with traditional media. Digital tools allow artists to experiment with colours, shapes, textures, and other elements, to produce unique and original pieces that can be easily shared and reproduced.

Digital art also offers new opportunities for collaboration and interactivity, as artists can work together online, share their work with audiences around the world, and even create art that responds to the viewer's actions or movement.



DRAWN BY:
SHUBHAJIT PAL

3rd year

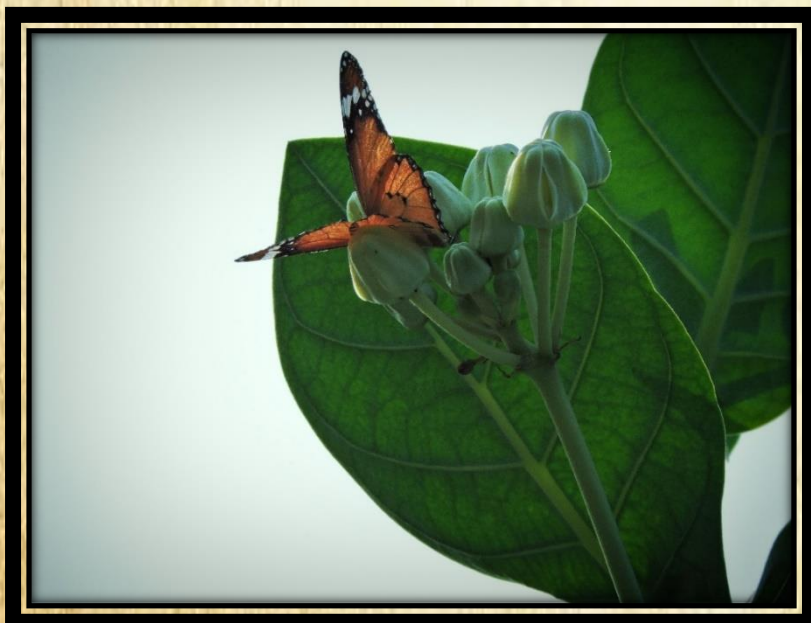
(USING MS - PAINT)



AYUSMAN MAJI
3rd year



ASTOM MONDAL
3rd year



- SOHAM MANDAL
3rd year



- SWASTIK SEN
3rd year



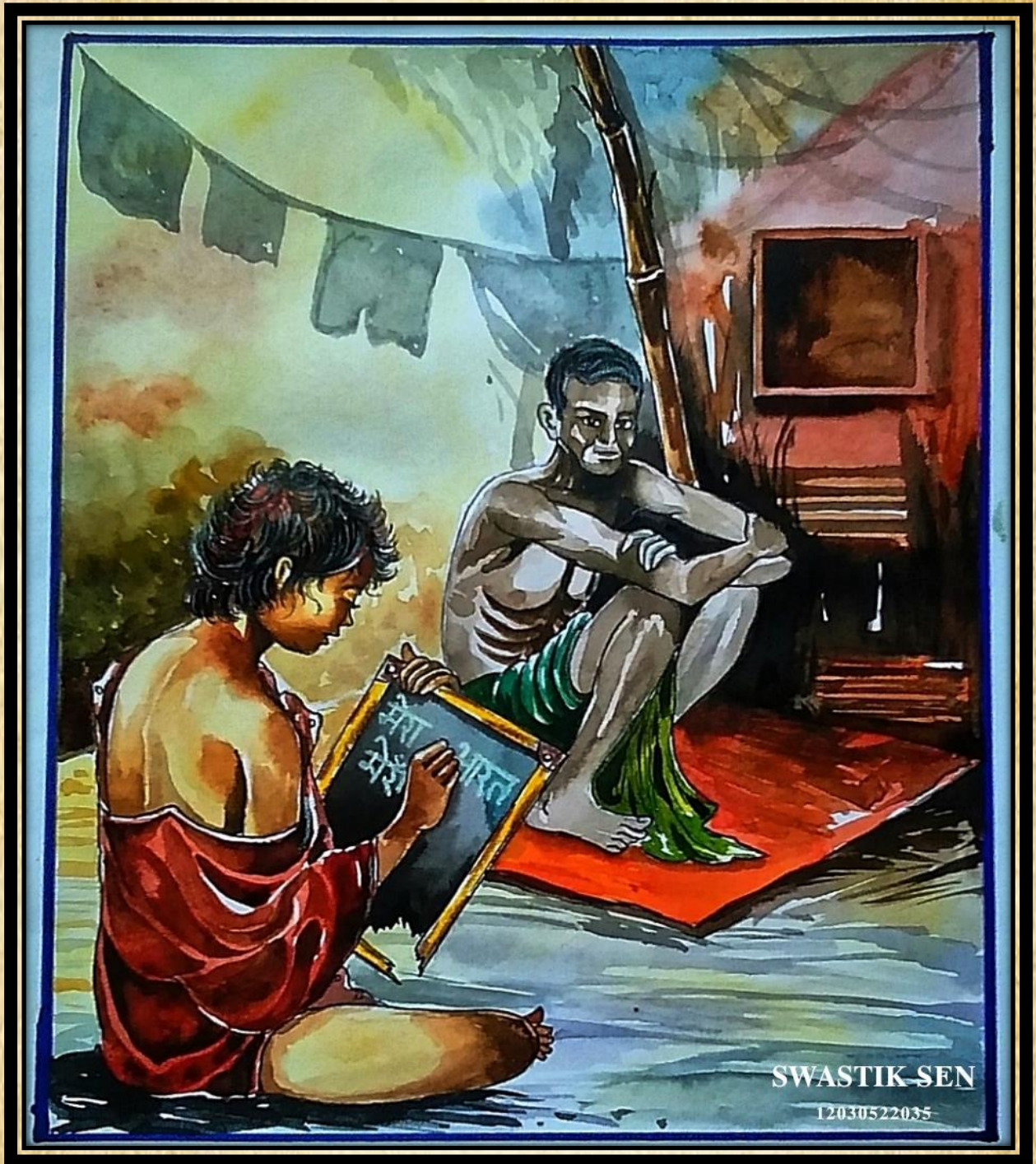
- **MADHAV RAJ**
3rd year



ANIK KUMAR SINHA
3rd year



ANIRBAN KR DAS
3rd year



- SWASTIK SEN
3rd year



KATHAKALI INDIA

- VADDADI HEMA
3rd year



- HARSH SHARMA
3rd year



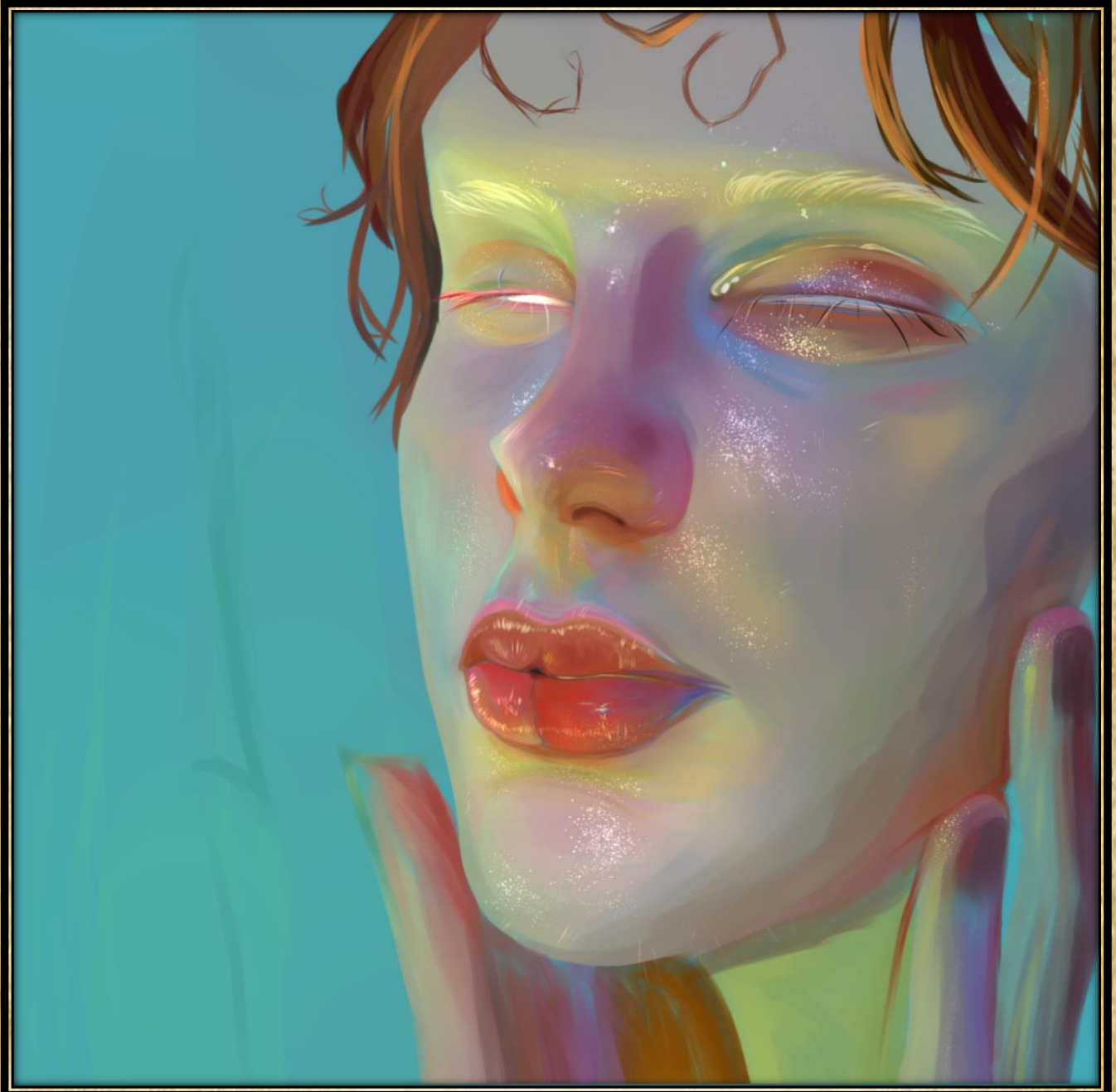
ARUNIMA PURKHAIT
2nd Year



SHRUTI JHA
2nd Year



SURYATAPA KONAR
2nd Year



SRINJAYEE GANGULY
2nd Year

I will dream
dream on
little dreamer

ALIGNED
TO
VALUES




*What
does your
heart say?*



...the ...
...the ...
...the ...

...the ...
...the ...



Dr. B. C. Roy Engineering College is one of the best colleges in East India. I am really glad and also blessed to be a student of this college. The education system and infrastructure of this college is of very high standard. Our college is the best address to build the future where there are good facilities for overall development of students along with studies.

- **SAMAR MANNA**
3rd year

Words can't express how much this college and department mean to me. Thanks to all the professors for their amazing lectures and feedbacks. And the special thanks to my "HOD" Mr. Chandan Bandyopadhyay, I will never forget your support and kindness. May this wisdom and well health goes long.

SUPRIYA
3rd year

Well to be honest I'm strung up because it's an entirely new department so, we have to build an empire out of scratch so big that the upcoming generation could look up to it but I believe together we can definitely do it.

- **SOHAM MANDAL**
3rd year

I am really happy to be a part of BCREC and Our Data science family. The best part is to have a such humble and kind HOD. Thank you, sir, for always supporting us in our path.

PINAKI RANJAN SAHU –
3rd year

Enlightened as a member of first Data Science Batch & Exhilarated by the pioneering work on the Departmental Magazine & Encouraged by all attentive folks of BCREC community.

- **ISHITA GOSWAMI**
3rd year



BCREC has an excellent reputation, and the Data Science family is a great community to be a part of my life. They are dedicated to the pursuit of knowledge and innovation in the field of data science, and I am proud to be associated with them.

ARPAN DAS -
3rd year

It's an honour for me to be a part of BCREC and the data science department. I am excited to learn and contribute to this dynamic field and look forward to being a part of this academic community.

- **SANTI SINGHA**
3rd year

I feel very glad and thankful to be the part of BCREC's Data science department. Want to acquire and gain more knowledge from here.
Thank you.

SATAVISA MOITRA -
3rd year

I as being a part of data science is very enthusiastic of how we are going to spend our 4 years. I met new people made acquaintance and collected data. Data is the new oil and I am proud to be in the Data Science department.

- **ABHISHEK GHOSHAL**
3rd year

It was an amazing experience thus far. I had never imagined that I would get so close to my classmates within this short time span. Looking forward to more beautiful and memorable experiences!

DEBANGAN MUKHERJEE -
3rd year

Being a student at BCREC college makes me feel grateful and proud, and the Data Science department already feels like a family to me. I'm eager to learn and do my best to contribute.

- **MEHULI LAHIRI**
3rd year



It feels amazing to be a part of BCREC and being member of data science family is like a cherry on ice-cream, lucky to have Chandan sir as our HOD who cares about everything whether it is about academic or non-academic. He is always there to help us anytime and in any situation.

MADHAV RAJ –
3rd year

It is a great experience being the part of BCREC especially being the part of Data Science family. Here we all encourage different interesting things under the inspection of our HOD sir. We are the first badge of this newly added department; we have responsibilities to build a legacy for our junior brothers and sisters.

- **ALAKENDU KUMAR**
3rd year

I feel very happy to be a student of BCREC and especially to be a student of Data Science because our department is very good department compared to other departments and especially HOD (Head of the Department) sir Dr. CHANDAN BANDYOPADHYAY is a very good teacher. He supports us not only in our studies but also in other activities and I have never seen a teacher as friendly as him.


SHOVAN KUNDU –
3rd year

I enjoy being a part of new technologies and trying out innovative solutions, which I noticed in this Data science family of BCREC.

- **DITSHA GHOSH**
3rd year

It's a great feeling to be a part of BCREC. It's like family to me. The friends, the classroom, and even the field all make me feel like home.

SANDIP DAS –
3rd year



প্রথমত Data science এর মতো এইরকম পরিবারের সদস্য হতে পেরে খুবই ভালো লাগছে। Department এর students, faculties এবং (HOD) Dr. Chandan Bandyopadhyay যিনি এই পরিবারকে সবসময় encourage করেন, সবার যৌথ উদ্যোগে CSE- Data Science department কলেজের সবথেকে unique এবং promising department হিসেবে পরিচিতি লাভ করেছে।

- **SOUJATYA BANERJEE**
3rd year

I am very delighted that I have chosen to pursue my B. Tech degree in DATA SCIENCE stream. It's an honour to be part of this education journey with all other fellow batch mates, and I am sure that all of us will excel in this field.

RAJDEEP SAHA -
3rd year

I feel successful as a student of BC Roy Engineering college. Especially our department (DATA SCIENCE) is like our family. Here everyone helps everyone in need which is really awesome. I don't know how DS department is for other people but for me DS department is the best ever.


- **PROMISE NANDI**
3rd year

I am very happy to be a part of BCREC and especially being the member of DATA SCIENCE family because our respected HOD sir is a very kind and helpful person.

AYUSH PRASAD -
3rd year

Being a student of data science in the reputed Dr. B C ROY ENGINEERING COLLEGE, brings me immense pleasure. I would also like to express my gratitude for having a very humble and helpful HOD like ours.

- **MUSKAN SINGH**
3rd year



"With its engaging articles and thought-provoking analysis, this data science magazine ignites a spark of curiosity and empowers readers to navigate the ever-evolving world of data with confidence."

- **SAGNIK MONDAL**
3rd year

It is a really good experience to adapt to the new ambience of BCREC. I feel blessed to be the first batch of Data Science Department of BCREC.

BIDISHA HAZRA -
3rd year

I am proud to be a student of BCREC and it opens a large platform for us to express our skills and teach newer skills.

- **SANDIPAN ROY CHOWDHURY**
3rd year

I am very glad to be a part of BCREC and especially being a part of DATA SCIENCE because it is a very good department and our respected HOD sir is very kind and helpful teacher.

SOURAV BASU -
3rd year

In the car on the way to my new college i wondered if I've made the right decision. It makes me happy when I met with my classmates and our honourable teachers. Data science is not only a department this is our emotions. Being the member of data science family and a part of BCREC I feel that this is perfect college and perfect department I chose.

- **SHUBHAJIT PAL**
3rd year

Everyone enters the Dr. B. C. Roy Engineering College with lots of dreams and this college gives you a 100% chance to make your dreams come true. I am truly blessed to get into this college and get such a wonderful family.

SHISHIR MAHATO -
3rd year

I feel very happy and overwhelmed to be a part of Dr. B. C. Roy Engineering College and a member of the amazing and fabulous Data Science family.

- **TANMOY SANTRA**
3rd year



It was a whole new experience which I always dreamt of after my school life. Being a part of data science family and meeting new people was a very fun and memorable process.

ANTARA SARKAR –
3rd year

The college campus is amazing. Students are friendly... Most of the teachers are very helpful, specially HOD of DS Sir Chandan Bandyopadhyay ... I am proud to be a part of Data Science department, and BCREC...

- **AYAN MUKHERJEE**
3rd year

I feel myself lucky for being a part of BCREC. I've had new experiences and made many good friends. I've got a lot to learn here. And I think Data Science is a very good way for me to establish myself. So, I consider myself fortunate to be a part of BCREC.


ABIR PANDA -
3rd year

Attending Dr. B. C Roy Engineering College has been a great experience with excellent academic programs and a supportive community. The knowledgeable faculty and modern facilities make learning enjoyable.

- **VADDADI HEMA**
3rd year

Even though the college life is not fancy or coloured as it is shown in the movies. But on the brighter side I got wonderful friends and very supportive teachers in the college and I hope to make more memories with them and go ahead in my life.

DEBOJYOTI CHATTERJEE
3rd year



I feel very glad and lucky to be a part of Dr B.C Roy Engineering college 's data science department. Thanks to all my professors, but special thanks to our department's HOD, DR Chandan Bandyopadhyay who is a kind, humble and friendly person.

- **RITIK MAITY**
3rd year

I had great experiences after joining the BCREC family. Teachers and facilities are nice and helpful, especially our HOD Sir is too generous and kind.

NILAY BANERJEE -
3rd year

It feels a magical and special moment to be part of the Dr. B. C. Roy Engineering College. And even in fact within the upcoming days the demand for data scientists will increase in various industries such as healthcare industry, finance, retails etc. This field provides remunerative career opportunities.

- **ADITYA RAJ**
3rd year

I think it's the best course for the upcoming days and I am also happy to be a part of the marvellous Dr. B. C. Roy Engineering College.

JOYDEEP GORAI -
3rd year

I feel very special as a member of data science, especially for our respected HOD sir Chandan Bandyopadhyay. I think it's my best part of life...

- **ANIK KUMAR SINHA**
3rd year

I don't have much to say but I feel good to be a part of the data science family and the first batch of this department in this college.

NEHAL CHANDRA -
3rd year



I am very glad to be a part of BCREC Member and also very blissful for a student of data science family.

- **RANIT MONDAL**
3rd year

I feel very special being the member of the Data Science. It is because of my caring and loving H.O.D. He loves and cares his students and I like it.

SHUBHAM KUMAR –
3rd year

Our data science department of BCREC is such a place where I have found a lot of friends after my school life. All the faculty teachers specially our respected HOD sir are very supportive. It feels like beginning of a journey with a new family.

- **AYUSMAN MAJI**
3rd year

"Empowering innovation through data, united as the Dr. B C Roy Engineering College Data Science family."

KINGSHUMAN ROOJ –
3rd year

Being a part of DR. B.C. ROY Engineering College Since From 2022 I have learned a lot of things and experienced many things here in terms of knowledge and experience. I am feeling very Lucky to be a part of Data science Family as its first batch so I have very strong affection with my department.

SHREYASH KASYAP
3rd year

First of all, BCREC is the path where I have started my journey of engineering. Our DATA SCIENCE department is not only a branch; it's also a family where we study together, works together & enjoying together every moment of our college. And also, our HOD sir is so careful, helpful & friendly to us. I hope that, may our department move towards more knowledge and success in the coming days.

SWASTIK SEN -
3rd year





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**DR. B. C. ROY ENGINEERING COLLEGE,
DURGAPUR**

is now proudly

AUTONOMOUS

Grateful beyond words!

Thanks to

UGC and our amazing community. To our students, parents, alumni,
& faculty—thank you for your endless support and belief in us.