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Ashokkumar Patel  
Nishtha Kesswani  
Madhusudhan Mishra  
Preetisudha Meher *Editors*

# Advances in Machine Learning and Big Data Analytics I

ICMLBDA 2023, NIT Arunachal Pradesh,  
India, May 29-30

 Springer

Ashokkumar Patel • Nishtha Kesswani •  
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# The Evolutionary Impact of Pattern Recognition in Research Applications: A Wide Spectrum Survey



Sumit Pal, Sovan Bhattacharya, Bappaditya Mondal, Anjan Bandyopadhyay, Dola Sinha, and Chandan Bandyopadhyay

**Abstract** Pattern recognition (PR) is the study of this particular topic. A pattern is something that separates and distinguishes one object from another. There are many practical applications for PR, including those in industrial research, plant biology, and medical science fields. The research conducted in these various domains is examined in this chapter. It briefly describes the difficulties, restrictions, achievements, and employed algorithms. It seems that this field's research has a lot of promise. Some of the results are excellent, while others fall short, but the prospect of seeing the results soon is what keeps us hopeful and inspired.

**Keywords** Pattern recognition · Machine learning · Deep learning · Neural networks · Plant biology · Medical EMG

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S. Pal (✉)

Department of CSE, Dr. B. C. Roy Engineering College, Durgapur, India

S. Bhattacharya

Department of CSE, Data Science, Dr. B. C. Roy Engineering College, Durgapur, India

Department of CSE, National Institute of Technology, Durgapur, India

B. Mondal

Academy of Technology, Adisaptagram, Hooghly, India

A. Bandyopadhyay

Department of ECE, SR University, Warangal, India

D. Sinha

Department of Electrical Engineering, Dr. B. C. Roy Engineering College, Durgapur, India

e-mail: [dola.sinha@bcrec.ac.in](mailto:dola.sinha@bcrec.ac.in)

C. Bandyopadhyay

Department of CSE, Data Science, Dr. B. C. Roy Engineering College, Durgapur, India

Department of CSE, University of Bremen, Bremen, Germany

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