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Ashokkumar Patel  
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# Advances in Machine Learning and Big Data Analytics I

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

 Springer

Ashokkumar Patel • Nishtha Kesswani •  
Madhusudhan Mishra • Preetisudha Meher  
Editors

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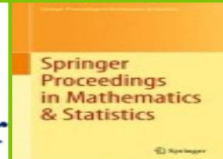
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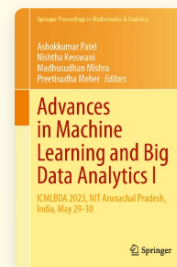


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## The Evolutionary Impact of Pattern Recognition in Research Applications: A Wide Spectrum Survey

Conference paper | First Online: 01 February 2025

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### Advances in Machine Learning and Big Data Analytics I

(ICMLBDA 2023)

[Sumit Pal](#), [Sovan Bhattacharya](#), [Bappaditya Mondal](#), [Anjan Bandyopadhyay](#), [Dola Sinha](#) & [Chandan Bandyopadhyay](#)

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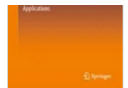
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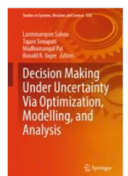


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# The Evolutionary Impact of Pattern Recognition in Research Applications: A Wide Spectrum Survey



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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