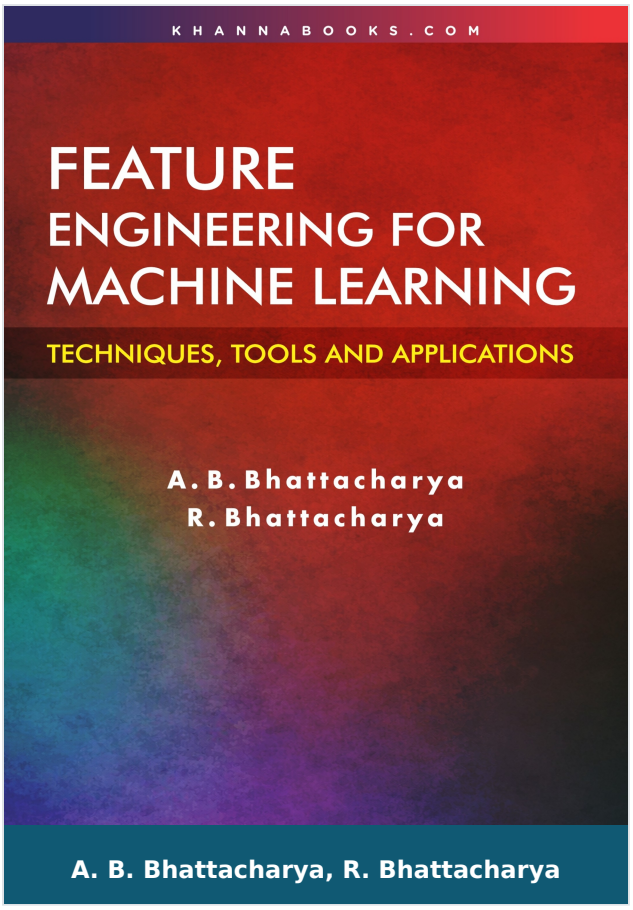



# Feature Engineering for Machine Learning (Techniques, Tools and Applications)

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## Product Description

**Feature Engineering for Machine Learning (Techniques, Tools and Applications)**

Feature engineering is where machine learning success is truly built.

Algorithms get the spotlight, but the real competitive edge lies in how you shape your data. Feature Engineering for Machine Learning is your practical, no-nonsense guide to transforming raw data into powerful signals that unlock model performance, reliability, and insight.

Whether you're a data scientist, ML engineer, analyst, or student, this book takes you beyond theory into the craft of creating features that matter. You'll learn how to identify meaningful patterns, design robust transformations, handle messy real-world data, and systematically improve model outcomes.

**Key Features**

Through clear explanations, real examples, and actionable techniques, you'll discover how to:

- Turn raw data into predictive features
- Apply domain knowledge to engineer smarter signals
- Handle categorical, temporal, and high-dimensional data
- Avoid common pitfalls that sabotage model performance
- Build scalable, reproducible feature pipelines

Feature engineering isn’t just a step in the workflow, it's the foundation of great machine learning. Master it, and you don’t just build models… you build better decisions.

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Prof. A. B. Bhattacharya did his MSc and PhD degree from the University of Calcutta in Physics and Post-doc from the Massachusetts Institute of Technology (MIT), Cambridge, USA. He worked in close collaboration with the leading laboratories like Lincoln Laboratory; Milestone Hill Observatory; Earth, Atmospheric and Planetary Sciences division of MIT and many other well recognized laboratories in India and abroad. He served as Professor & Head of the Department of Physics, University of Kalyani; Dean of Research and Head of the ECE Department, Techno India University; Pro Vice Chancellor of JIS University and Director of Brainware University. He has published 32 text books for Science and Engineering students, two popular books for general readers and over 400 research articles in reputed International Journals. Under his supervision 24 scholars received their doctoral degree. He is a fellow of the Institute of Electronics and Telecommunication Engineers and member of many scientific organizations. India International Friendship Society awarded him the prestigious "Shiksha Ratna Award" and Certificate of Excellence for meritorious services, outstanding performance and significant

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contribution to education. The International Institute of Success Awareness hon0red him with their globally recognized "Glory of India Gold Medal" for his outstanding contribution to the national stature of India. A few words from the certificate issued by Prof. Williams of MIT may be quoted "Our collaborative effort was directed at the wavelength dependence of radar echoes observations with the Millstone Hill UHF radar in Westford. He made use of the Charles River Data System computer in the Weather Radar Laboratory for these calculations. His results help to make a convincing case that the volume reflectivity associated with lighting is a diminishing function of radar wavelength, contrary to contemporary thinking". Dr.

**R. Bhattacharya**

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