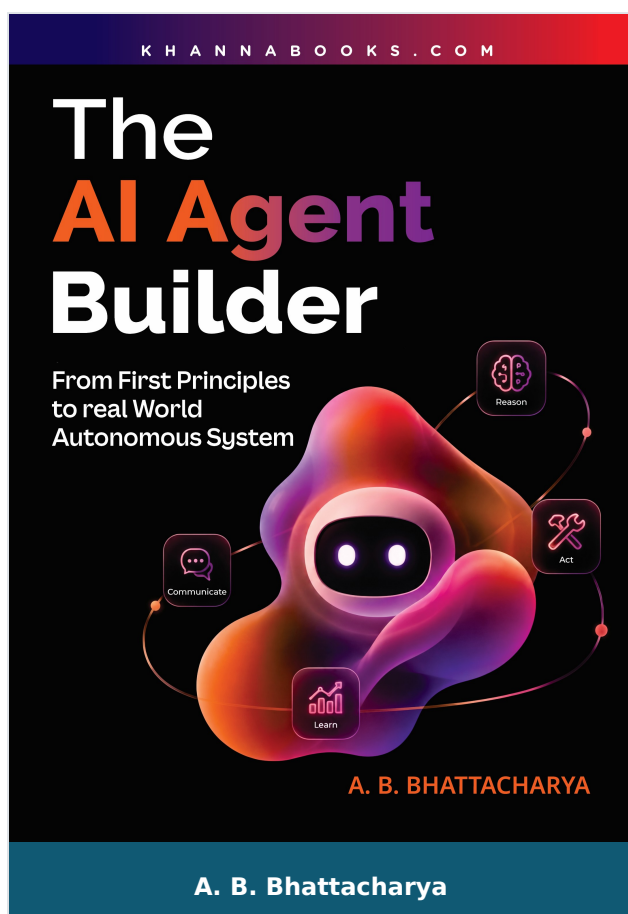




## The AI Agent Builder (From First Principles to real World Autonomous System)

**Author :** A. B. Bhattacharya

**ISBN 13 :** 978-93-09430-40-4

**ISBN 10 :** 9309430400

**E-ISBN 13 :** 978-93-09430-40-4

**Edition :** First Edition

**Pages :** 352

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 695.00

**Categories :** [Computer Science Engineering,](#)  
[New Arrivals, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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The AI Agent Builder: From First Principles to Real-World Autonomous Systems is a comprehensive guide that introduces the concepts, architecture, development, and deployment of AI agents through a balanced combination of theoretical foundations and practical implementation. Intended for students, researchers, developers, and AI practitioners, the book explains agent architectures, large language models, memory systems, reasoning, planning, tool integration, multi-agent collaboration, safety, evaluation, deployment, and real-world applications.

## Salient Features

- **AI Agent Foundations:** Explains the evolution of AI agents, agent architectures, environments, perception, reasoning, action, and large language models through a structured first-principles approach.
- **Practical Agent Development:** Covers memory systems, planning strategies, reasoning techniques, tool integration, autonomous execution, and multi-agent collaboration with exercises and project-based learning.
- **Modern AI Technologies:** Introduces APIs, function calling, external knowledge integration, vector databases, retrieval-augmented generation, and scalable deployment methods for intelligent autonomous systems.
- **Safety and Evaluation:** Explains performance benchmarking, reliability testing, hallucination detection, AI safety principles, prompt injection protection, guardrails, and responsible deployment practices.
- **Real-World Applications:** Demonstrates AI agent implementations for research assistance, customer support, data analysis, productivity, and other practical domains through representative application scenarios.
- **Practice-Oriented Learning:** Reinforces understanding through practical exercises, project ideas, short-answer questions, and multiple-choice questions that

strengthen conceptual and implementation skills.

## Table Of Contents

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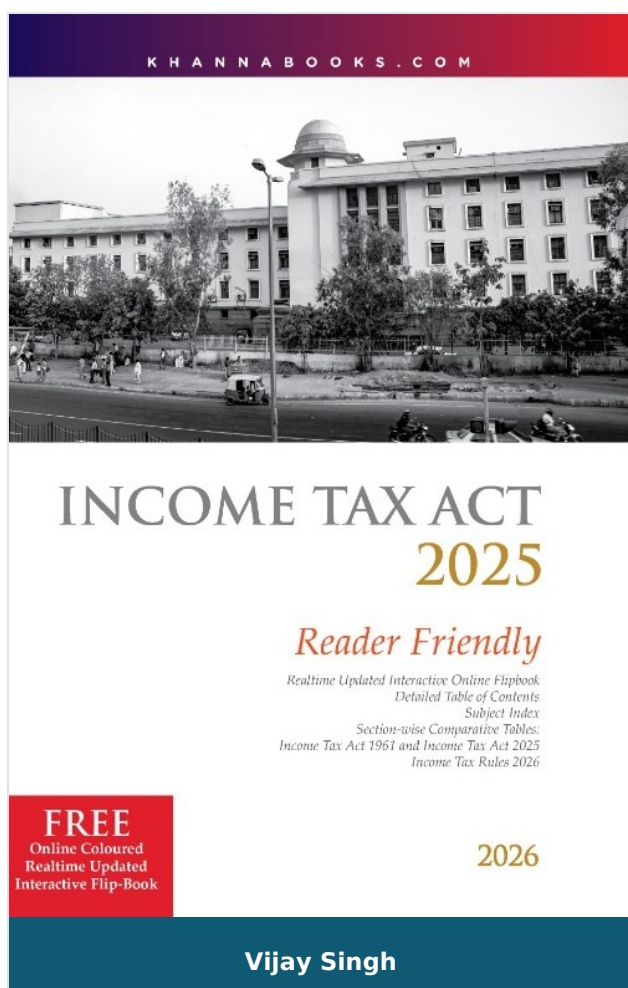
- Part I: Foundations of AI Agents
  - 1- The Rise of AI Agents
  - 2- Anatomy of an AI Agent
  - 3- The AI Agent Environment
- Part II: Intelligence Behind AI Agents
  - 4- Large Language Models as Agent Brains
  - 5- Memory Systems for Agents
  - 6- Planning and Reasoning
- Part III: Tools and Capabilities
  - 7- Tools Use and Function Calling
  - 8- Multi-Tools Agents
  - 9- Autonomous Task Execution
- Part IV: Multi-Agent Systems
  - 10- Collaborative AI Agents
  - 11- Specialized Agents
- Part V: Testing, Safety, And Optimization
  - 12- Evaluating AI Agents
  - 13- Safety and Alignment
- Part VI: Development and Real-World Applications
  - 14- Developing AI Agents
  - 15- Real-World Agents Applications

## Author

---

### A. B. Bhattacharya

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 contribution to education. The International Institute of Success Awareness honored 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 lightning is a diminishing function of radar wavelength, contrary to contemporary thinking". Dr.



## Income Tax ACT 2025

|                         |                                                             |
|-------------------------|-------------------------------------------------------------|
| <b>Author :</b>         | Vijay Singh                                                 |
| <b>ISBN 13 :</b>        | 978-93-09430-25-1                                           |
| <b>ISBN 10 :</b>        | 9309430257                                                  |
| <b>E-ISBN 13 :</b>      | 978-93-09430-25-1                                           |
| <b>Edition :</b>        | First                                                       |
| <b>Pages :</b>          | 732                                                         |
| <b>Type of book :</b>   | Physical                                                    |
| <b>Year :</b>           | 2026                                                        |
| <b>Language :</b>       | English                                                     |
| <b>Publisher :</b>      | Khanna Publishing House                                     |
| <b>M.R.P :</b>          | Rs 2,195.00                                                 |
| <b>Categories :</b>     | <a href="#">Civil Engineering, New Arrivals, Book Store</a> |
| <b>Condition Type :</b> | New                                                         |
| <b>Country Origin :</b> | India                                                       |

## Product Description

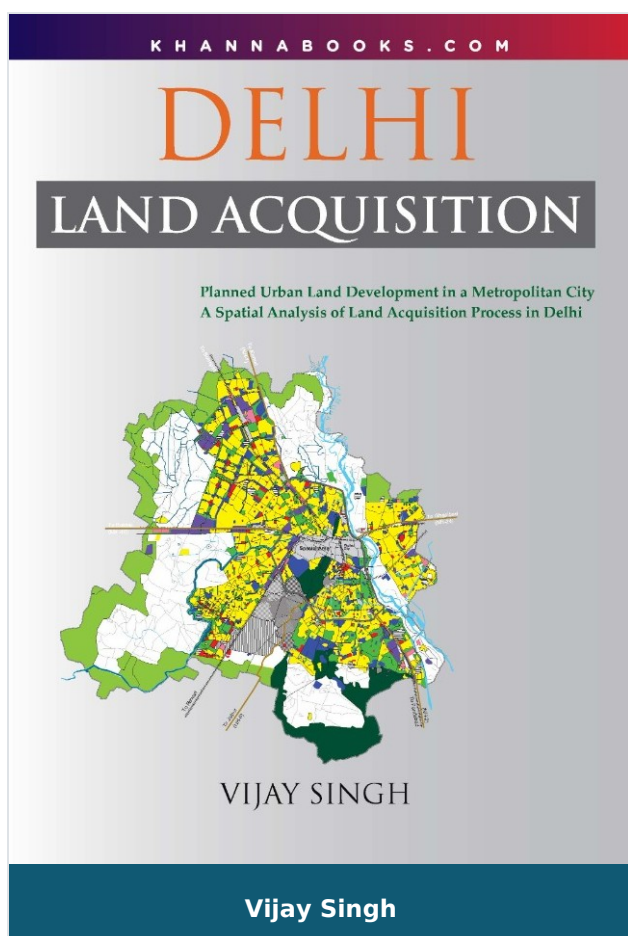
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The Income Tax 2025 Act notified on the 21st August 2025 has come into force with effect from the 1st April 2026. The present Reader-friendly version of the Income Tax Act 2025 with its online Interactive Flipbook will be of great help to the practitioners as well students of Income Tax in India. The coloured online flipbook provided free with the print book is also mobile responsive. The gazette notification of the Income Tax Act 2025 can be downloaded from the online flipbook. The section-wise coloured comparative tables of the Income Tax Act 1961 and the Income Tax Act 2025; and the Income Tax Rules 2026 notified on the 20th March 2026 are provided in the online flipbook for ready reference. With a Free On-line Real Time Updated Interactive Flipbook of Income Tax Act 2025 and its PDF.

## Author

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**Vijay Singh**



## Delhi (Land Acquisition) with CD

|                         |                                                             |
|-------------------------|-------------------------------------------------------------|
| <b>Author :</b>         | Vijay Singh                                                 |
| <b>ISBN 13 :</b>        | 978-93-09430-28-2                                           |
| <b>ISBN 10 :</b>        | 9309430281                                                  |
| <b>E-ISBN 13 :</b>      | 978-93-09430-28-2                                           |
| <b>Edition :</b>        | First                                                       |
| <b>Pages :</b>          | 280                                                         |
| <b>Type of book :</b>   | Physical                                                    |
| <b>Year :</b>           | 2026                                                        |
| <b>Language :</b>       | English                                                     |
| <b>Publisher :</b>      | Khanna Publishing House                                     |
| <b>M.R.P :</b>          | Rs 1,195.00                                                 |
| <b>Categories :</b>     | <a href="#">Civil Engineering, New Arrivals, Book Store</a> |
| <b>Condition Type :</b> | New                                                         |
| <b>Country Origin :</b> | India                                                       |

## Product Description

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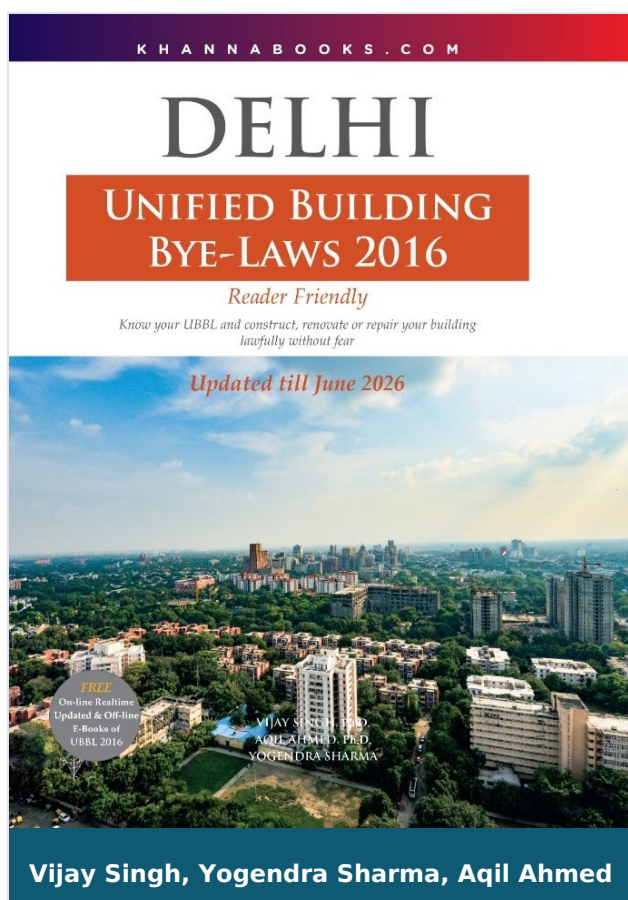
The first comprehensive and analytical study of the land acquisition process in Delhi where the urbanization was undertaken by the State acquiring the rural land on a large scale and converting it to urban uses. It is an important contribution in the domain of public policy and its application in the framework of time and space.

Along with Colour E-book and data tables in word document format.

## Author

---

**Vijay Singh**



## Delhi (Unified Building Bye-Laws 2016 (Colour Edition)

**Author :** Vijay Singh, Yogendra Sharma, Aqil Ahmed

**ISBN 13 :** 978-93-09430-32-9

**ISBN 10 :** 930943032X

**E-ISBN 13 :** 978-93-09430-32-9

**Edition :** First

**Pages :** 412

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 995.00

**Categories :** [Civil Engineering, New Arrivals, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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Annexure-1 The Building Bye-Laws for Delhi 1983 were revised in 2016 after a long spell of almost 33 years and now updated in 2020. In these years, Delhi's built landscape has enormously changed. Not only the volume of built-up area has increased, but the types of built-up constituents have also grown ranging from plotted construction to multiple flats; from authorised to unauthorised colonies, from JJ Clusters to built-up slums to name only a few, each one with a different character altogether, posing various kinds of challenges to the objective of developing a planned Delhi.

The understanding of Building Bye-laws which guide the construction, is very important if their compliance is to be a reality in Delhi. Incidentally, in their notified format, the Unified Building Bye-laws for Delhi 2016 are only a document describing a set of rules for buildings in Delhi, most of times, difficult to comprehend their simple meaning and implications by one's own builders.

For better compliance, it is necessary that these bye-laws are presented in a reader friendly way for their easy understanding by professionals as well as by people who want to build, repair or renovate their houses without any technical knowledge. It is for this purpose, that a reader friendly version of Unified Building Bye-laws 2016 has been designed.

The on-line real time updated e-book of UBBL for Delhi 2016 in the form of a flip book would keep the user updated of all the amendments and notifications on real time basis whereas its off-line version would provide the ease of reading and searching and the PDF version for using it for professional purposes.

The set of print book with its on-line and off-line versions will be a valuable asset for architects, building professionals, building owners, contractors & students.

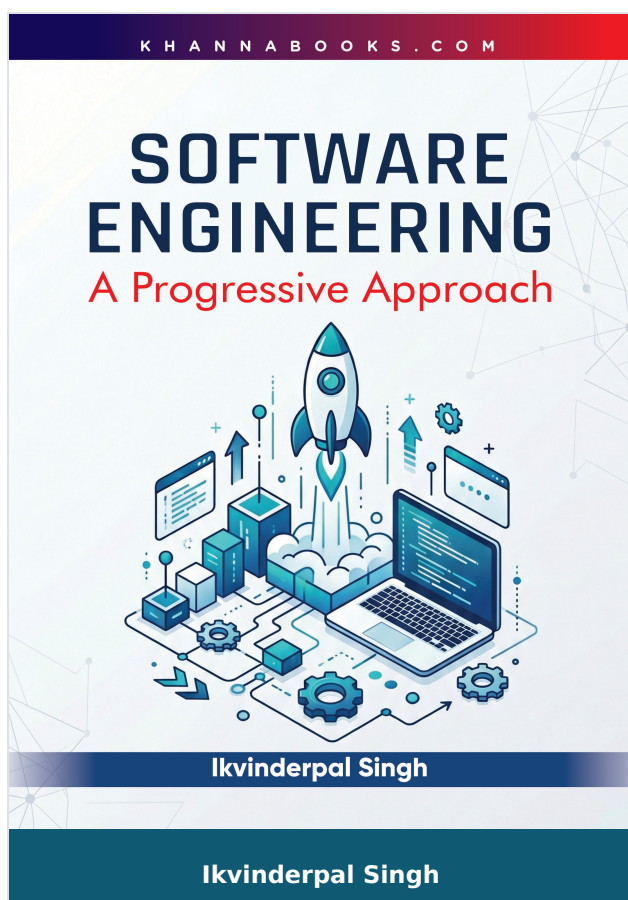
## Author

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Vijay Singh

Yogendra Sharma

Aqil Ahmed



## SOFTWARE ENGINEERING A Progressive Approach

**Author :** Ikvinderpal Singh

**ISBN 13 :** 978-93-82609-22-3

**ISBN 10 :** 9382609229

**E-ISBN 13 :** 978-93-82609-22-3

**Edition :** First

**Pages :** 536

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 699.00

**Categories :** [Computer Science Engineering,](#)  
[Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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**Software Engineering: An Engineering Approach** provides a comprehensive and reader-friendly introduction to software development as a rigorous engineering discipline. Tailored for upper-level undergraduate students, first-year graduate students, and industry practitioners, this text bridges the gap between chaotic programming habits and mature software practices. It outlines structural development life cycles, detailed cost estimation metrics, design modeling frameworks, and exhaustive verification methodologies. By highlighting the integration of Computer-Aided Software Engineering (CASE) tools, the text provides readers with the practical skills needed to deploy high-quality, reliable, and maintainable systems. Ultimately, this volume serves as an essential manual for navigating the rapid technical shifts within modern industrial applications.

### Salient Feature:

- **Foundational Learning Paradigms:** Evaluates core software development principles, stakeholder management roles, Davis's rules, and CMM quality frameworks to establish structural programming discipline.
- **Essential Algorithms:** Covers foundational process pathways including Waterfall, prototyping, incremental growth, Spiral architectures, and rapid development life cycles.
- **Practical Implementation:** Explains algorithmic test-case design using equivalence partitioning, boundary values, structural basis paths, and systematic integration testing methodologies.
- **Data Strategy:** Integrates data flow diagrams, structured dictionaries, entity relationships, and structural object-oriented UML modeling to streamline architectural configurations.
- **Model Optimization:** Maximizes lifecycle efficiency through automated CASE tool environments, repository coordination architectures, and software quality assurance

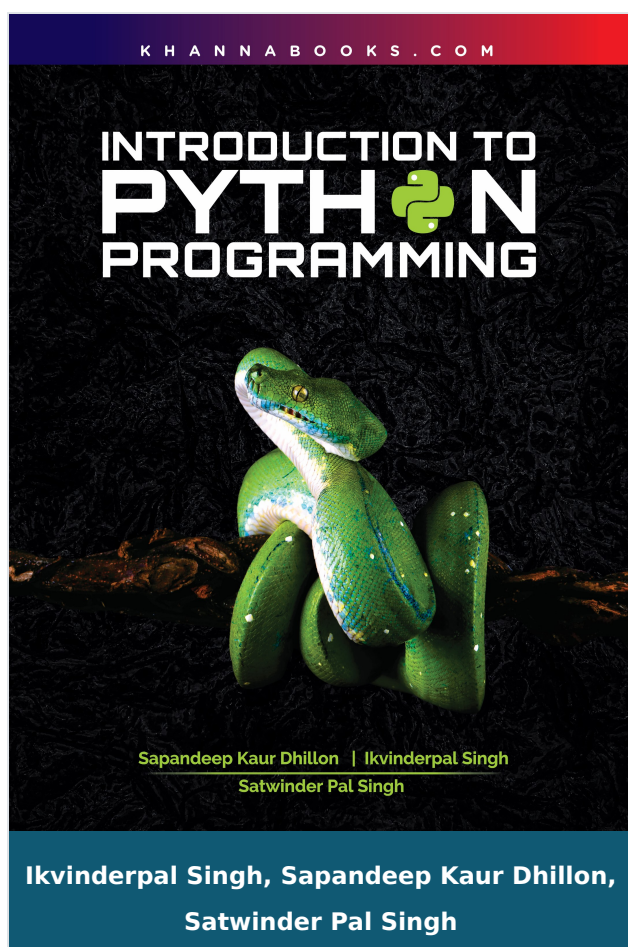
planning guides.

## Author

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### **Ikvinderpal Singh**

Dr. Ikvinderpal Singh is an Assistant Professor at Trai Shatabdi Guru Gobind Singh Khalsa college Amritsar, bringing 17+ years of academic leadership and research experience to the field of computer science. A Gold Medalist in B.Sc. IT, with an MCA (Distinction) and a Ph.D. in Neural Networks and Image Processing, he is known for blending rigorous research with practical innovation. A prolific academic creator, he has authored 37 books, published 82+ research papers, and designed 100+ industry-aligned skill-development courses. His expertise extends to doctoral evaluation, supervision, and active participation on 100+ editorial and review boards worldwide.



## INTRODUCTION TO PYTHON PROGRAMMING

**Author :** Ikvinderpal Singh, Sapandeep Kaur Dhillon, Satwinder Pal Singh

**ISBN 13 :** 978-93-09430-36-7

**ISBN 10 :** 9309430362

**E-ISBN 13 :** 978-93-09430-36-7

**Edition :** First

**Pages :** 428

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 695.00

**Categories :** [New Arrivals, Emerging Technologies, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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**INTRODUCTION TO PYTHON PROGRAMMING** Python Programming offers a practical and comprehensive introduction to Python, covering core programming concepts, data structures, functions, modules, exception handling, file handling, and object-oriented programming. The book also introduces NumPy and Pandas for numerical computing and data analysis. With clear explanations, solved examples, programming exercises, and real-world applications, it is an ideal resource for undergraduate and postgraduate students, beginners, and self-learners. **Salient Feature**

- Student-friendly and easy-to-understand approach.
- Covers Python fundamentals to intermediate concepts.
- Solved examples, practical programs, and exercises.
- Algorithms and programming logic explained step by step.
- Includes NumPy and Pandas for data analysis.

## Author

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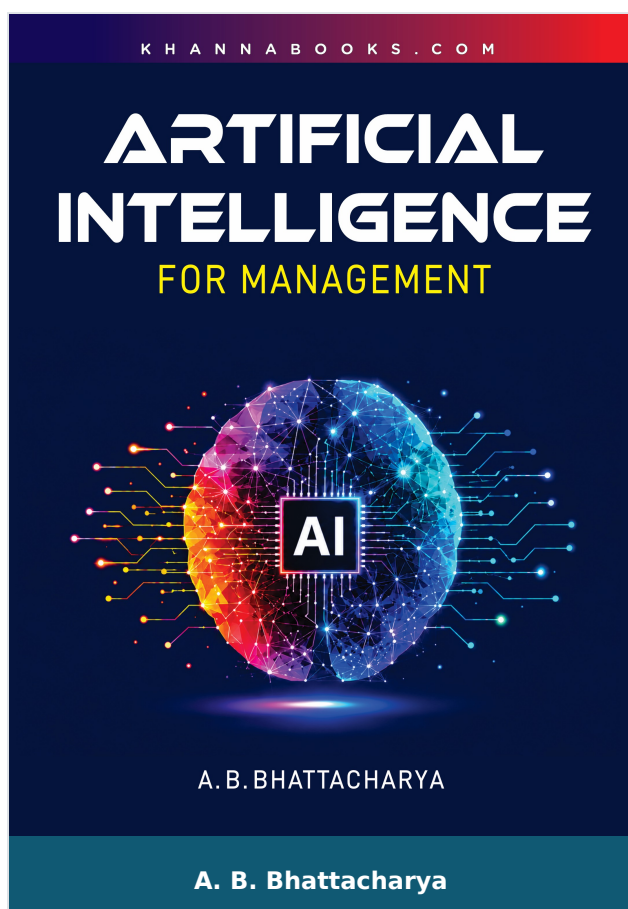
### **Ikvinderpal Singh**

Dr. Ikvinderpal Singh is an Assistant Professor at Trai Shatabdi Guru Gobind Singh Khalsa college Amritsar, bringing 17+ years of academic leadership and research experience to the field of computer science. A Gold Medalist in B.Sc. IT, with an MCA (Distinction) and a Ph.D. in Neural Networks and Image Processing, he is known for blending rigorous research with practical innovation. A prolific academic creator, he has authored 37 books, published 82+ research papers, and designed 100+ industry-aligned skill-development courses. His expertise extends to doctoral evaluation, supervision, and active participation on 100+ editorial and review boards worldwide.

### **Sapandeep Kaur Dhillon**

Sapandeep Kaur Dhillon is an assistant professor in the department of computer science, Guru Nanak Dev University, Amritsar, bringing 12+ years of dedicated academic experience to the discipline. She has authored 4 books, published 10+ research papers across national and international journals, reflecting her steady engagement with emerging trends in computing. Her academic interests span data structures, Compiler Design, and Artificial Intelligence, where she integrates foundational theory with practical, algorithmic thinking.

### **Satwinder Pal Singh**



## Artificial Intelligence For Management

**Author :** A. B. Bhattacharya

**ISBN 13 :** 978-93-09430-11-4

**ISBN 10 :** 9309430117

**E-ISBN 13 :** 978-93-09430-11-4

**Edition :** First

**Pages :** 176

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 395.00

**Categories :** [Computer Science Engineering](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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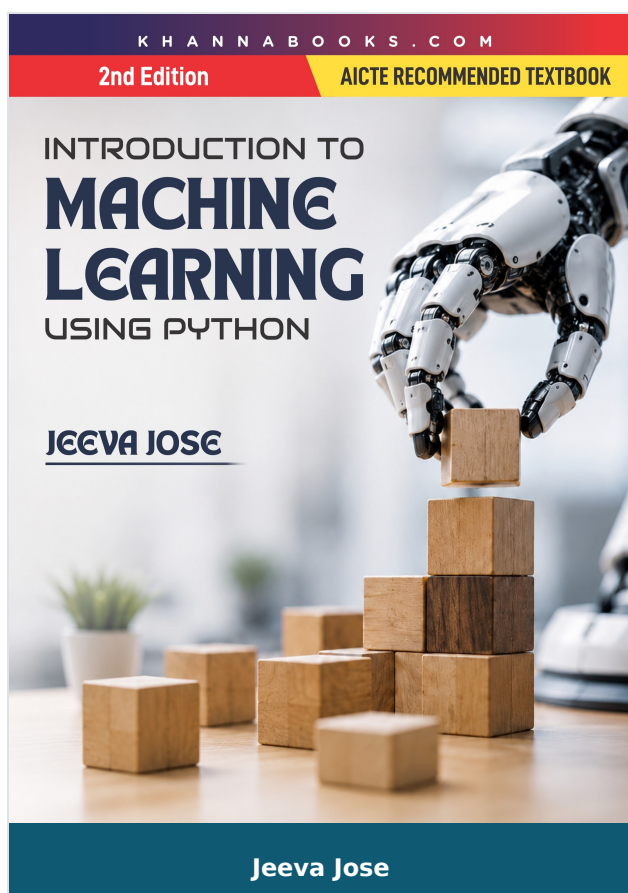
Artificial Intelligence is transforming the way organizations operate, decide, and grow. This book bridges the gap between AI concepts and real-world managerial applications, empowering managers to make informed decisions, drive innovation, and lead responsibly in the AI era.

## Author

---

### A. B. Bhattacharya

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 contribution to education. The International Institute of Success Awareness honored 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 lightning is a diminishing function of radar wavelength, contrary to contemporary thinking". Dr.



## Introduction to Machine Learning Using Python

|                         |                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Author :</b>         | Jeeva Jose                                                                                                                                                                            |
| <b>ISBN 13 :</b>        | 978-93-09430-35-0                                                                                                                                                                     |
| <b>ISBN 10 :</b>        | 9309430354                                                                                                                                                                            |
| <b>E-ISBN 13 :</b>      | 978-93-09430-35-0                                                                                                                                                                     |
| <b>Edition :</b>        | Second                                                                                                                                                                                |
| <b>Pages :</b>          | 200                                                                                                                                                                                   |
| <b>Type of book :</b>   | Physical                                                                                                                                                                              |
| <b>Year :</b>           | 2026                                                                                                                                                                                  |
| <b>Language :</b>       | English                                                                                                                                                                               |
| <b>Publisher :</b>      | Khanna Publishing House                                                                                                                                                               |
| <b>M.R.P :</b>          | Rs 268.00                                                                                                                                                                             |
| <b>Categories :</b>     | <a href="#">Computer Science Engineering,</a><br><a href="#">New Arrivals, University</a><br><a href="#">Recommended, Computer Science</a><br><a href="#">Engineering, Book Store</a> |
| <b>Condition Type :</b> | New                                                                                                                                                                                   |
| <b>Country Origin :</b> | India                                                                                                                                                                                 |

## Product Description

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Salient features of this book:

AICTE recommended book for Indian Universities and Autonomous colleges.

- This book can be used as a self study material or for instructor assisted teaching.
- Frequent questions for interviews and examinations are provided.

Topics Covered in this Book

Chapter 1. Introduction to Machine Learning

Chapter 2. Regression

Chapter 3. Classification

Chapter 4. Cluster Analysis

Chapter 5. Advanced Multivariate Analysis

Chapter 6. Semi-supervised, Reinforcement & Active Learning

Chapter 7. Deep Learning

Chapter 8. Introduction to TensorFlow

Chapter 9. Regression using TensorFlow

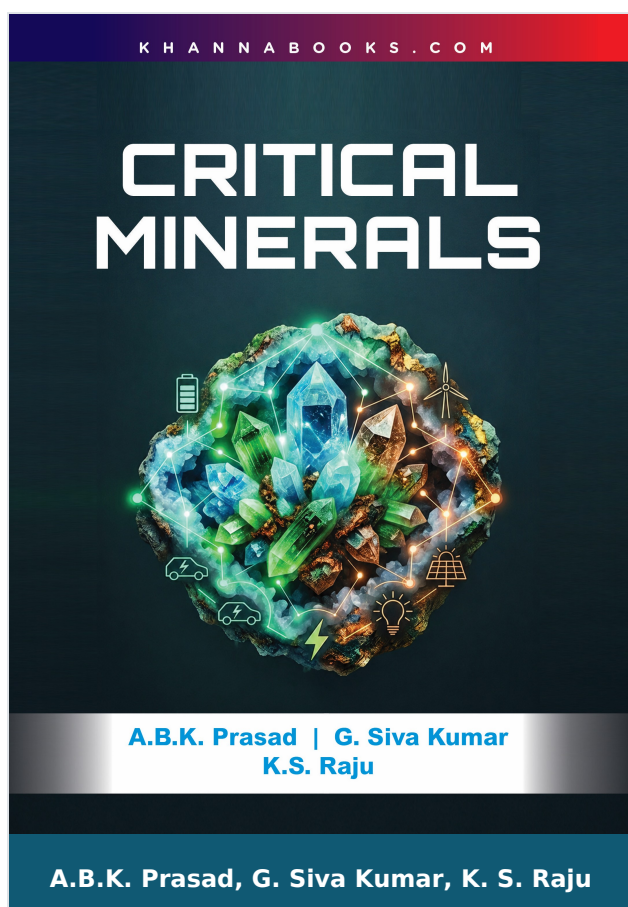
Chapter 10. Artificial Neural Networks using TensorFlow

## Author

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### Jeeva Jose

Dr. Jeeva Jose completed Ph. D. in Computer Science from Mahatma Gandhi University, Kerala, India and is a faculty member at BPC College, Kerala. Her passion is teaching and areas of interests include world wide web, Data Mining and Cyber laws. She has been in higher education for the last 15 years and has completed three research projects funded by UGC and KSCSTE. She has published more than twenty research papers in various refereed journals and conference proceedings. She has edited three books and has given many invited talks in various conferences. She is a recipient of ACM-W Scholarship provided by Association for Computing Machinery, New York.



## Critical Minerals

**Author :** A.B.K. Prasad, G. Siva Kumar, K. S. Raju

**ISBN 13 :** 978-93-09430-10-7

**ISBN 10 :** 9309430109

**E-ISBN 13 :** 978-93-09430-10-7

**Edition :** First

**Pages :** 96

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 198.00

**Categories :** [New Arrivals, Metallurgical Engineering, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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The global transition from fossil fuel energy to green energy heavily relies on critical minerals containing lithium, nickel, cobalt, copper and Rare Earth Elements (REEs). Critical minerals provide a comprehensive guide to these essential resources, detailing their geological occurrence, mining techniques and processes. It highlights their indispensable role in manufacturing modern technologies from electric vehicle (EV) batteries, wind turbines to advanced digital electronics and strategic defence systems. Beyond the technical aspects, the book critically examines the geopolitical landscape, addressing market monopolies, price volatility, and supply chain uncertainties. It also sheds light on the environmental concerns of mining and India's strategic push for self-reliance through the National Critical Mineral Mission. Written with clarity, it serves as a highly useful resource for university students pursuing engineering, geology, metallurgy, and material sciences, as well as industry professionals navigating this vital sector.

**Salient Features**

- Strategic Classification:** Classifies critical minerals based on economic importance and global supply
- Rare Earth Elements:** Covers the occurrence and complex chemical extraction processes of REEs
- Lithium Processing:** Details advanced extraction techniques from hard rock pegmatites and continental brines
- Analytical Methods:** Explains the use of advanced analytical instruments like ICP-MS, XRF, and LIBS for precise elemental analysis and mineral identification
- Green Energy:** Explores the use of critical minerals and their compounds in EV motors, wind turbines, and solar panels
- Geopolitics:** Analyses international trade policies, market monopolies and supply chain vulnerabilities
- India's Initiatives:** Details the National Critical Minerals Mission and domestic resource potential
- Environmental Impact:** Discusses the ecological footprints of mining and processing operations and need for sustainability.

## Author

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**A.B.K. Prasad**

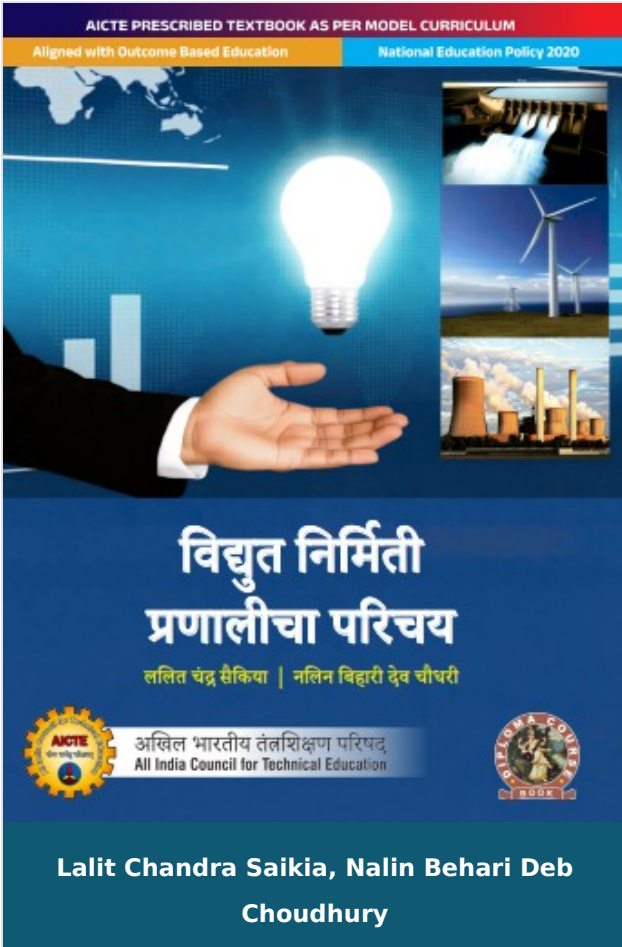
A.B.K. Prasad,

**G. Siva Kumar**

G. Siva Kumar, K.S. Raju

**K. S. Raju**

A.B.K. Prasad, G. Siva Kumar, K.S. Raju



## Introduction to Electric Generation Systems

|                         |                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------|
| <b>Author :</b>         | Lalit Chandra Saikia, Nalin Behari Deb Choudhury                                         |
| <b>ISBN 13 :</b>        | 978-93-55383-86-0                                                                        |
| <b>ISBN 10 :</b>        | 935538386X                                                                               |
| <b>E-ISBN 13 :</b>      | 978-93-55383-86-0                                                                        |
| <b>Edition :</b>        | First                                                                                    |
| <b>Pages :</b>          | 280                                                                                      |
| <b>Type of book :</b>   | Physical                                                                                 |
| <b>Year :</b>           | 2026                                                                                     |
| <b>Language :</b>       | English                                                                                  |
| <b>Publisher :</b>      | Khanna Publishing House                                                                  |
| <b>M.R.P :</b>          | Rs 425.00                                                                                |
| <b>Categories :</b>     | <a href="#">AICTE Prescribed Textbooks,</a><br><a href="#">Marathi Books, Book Store</a> |
| <b>Condition Type :</b> | New                                                                                      |
| <b>Country Origin :</b> | India                                                                                    |

**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: [contact@khannabooks.com](mailto:contact@khannabooks.com) | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

## Product Description

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Introduction to Electric Generation Systems

## Author

---

### **Lalit Chandra Saikia**

Dr. Lalit Chandra Saikia Associate Professor National Institute of Technology Silchar,  
Assam Dr.

### **Nalin Behari Deb Choudhury**

Dr. Nalin Behari Deb Choudhury Professor National Institute of Technology Silchar, Assam



## Malware Analysis

**Author :** N. Senthamilarasi, V. Subapriya, Nikitha

**ISBN 13 :** 978-93-55389-84-8

**ISBN 10 :** 9355389841

**E-ISBN 13 :** 978-93-55389-84-8

**Edition :** First

**Pages :** 132

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 248.00

**Categories :** [New Arrivals, Emerging Technologies, Book Store, Sathyabama Series](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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In today's interconnected digital landscape, the threat from malicious software is a constant and rapidly evolving challenge, capable of inflicting significant harm on individuals and organizations. MALWARE ANALYSIS is an essential guide crafted to provide a comprehensive foundation for cybersecurity specialization in both malware analysis and Operating System (OS) security. It is designed to equip students, security professionals, IT professionals, and researchers with the crucial tools and knowledge needed to identify, understand, and effectively neutralize threats in real-world environments.

The book's core value lies in its pragmatic approach, meticulously combining theoretical foundations with indispensable hands-on analysis techniques. Readers will gain an in-depth exploration of both static malware analysis (examining code without execution) and dynamic malware analysis (studying behavior during execution). The content systematically progresses from fundamental concepts of malware types—such as worms, ransomware, and rootkits—and their evolution to advanced analysis techniques. Key topics include setting up an isolated malware analysis lab, using powerful behavioral monitoring tools like Process Monitor and Wireshark, and advanced code-level debugging with tools like OLLYDBG. Furthermore, it covers advanced malware functionality like Process Injection and modern detection techniques, including signature-based, non-signature-based, and machine-learning methods. This text is an indispensable resource for mastering the skills required to safeguard digital infrastructure against emerging and complex cyber threats.

In today's interconnected digital landscape, the threat from malicious software is a constant and rapidly evolving challenge, capable of inflicting significant harm on individuals and organizations. MALWARE ANALYSIS is an essential guide crafted to provide a comprehensive foundation for cybersecurity specialization in both malware

analysis and Operating System (OS) security. It is designed to equip students, security professionals, IT professionals, and researchers with the crucial tools and knowledge needed to identify, understand, and effectively neutralize threats in real-world environments.

The book's core value lies in its pragmatic approach, meticulously combining theoretical foundations with indispensable hands-on analysis techniques. Readers will gain an in-depth exploration of both static malware analysis (examining code without execution) and dynamic malware analysis (studying behavior during execution). The content systematically progresses from fundamental concepts of malware types—such as worms, ransomware, and rootkits—and their evolution to advanced analysis techniques. Key topics include setting up an isolated malware analysis lab, using powerful behavioral monitoring tools like Process Monitor and Wireshark, and advanced code-level debugging with tools like OLLYDBG. Furthermore, it covers advanced malware functionality like Process Injection and modern detection techniques, including signature-based, non-signature-based, and machine-learning methods. This text is an indispensable resource for mastering the skills required to safeguard digital infrastructure against emerging and complex cyber threats.

#### Salient Features:

- **Malware Taxonomy Deep Dive:** Explores the fundamental concepts, history, and taxonomy of malicious software, including worms, ransomware, rootkits, spyware, and sophisticated Advanced Persistent Threats (APTs).
- **Static Analysis Mastery:** Provides thorough instruction on static analysis techniques, covering X86 architecture, the Portable Executable (PE) File Format, and essential concepts like Opcodes and Disassembly for code inspection.
- **Dynamic Behavior Profiling:** Details the principles of dynamic analysis, including setting up an isolated Malware Sandbox and utilizing key tools like Process Monitor and

Wireshark to observe runtime behavior and network traffic.

- **Practical Lab Setup:** Guides the reader through assembling a complete malware analysis toolkit, covering virtualization, isolation techniques, and the use of behavioral monitoring and code-analysis utilities.
- **Advanced Debugging Techniques:** Teaches practical skills in advanced code-level analysis, including kernel vs. user-mode debugging, setting Breakpoints and Tracing execution, and using debuggers like OLLYDBG.
- **Covert Malware Functionality:** Discusses sophisticated attack vectors and persistence mechanisms, such as Process Injection, Privilege Escalation, Downloaders, and Credential Stealers.
- **Detection & Evasion Tactics:** Explores contemporary techniques like signature-based, similarity-based, and Machine Learning methods for detection, alongside malware evasion tactics such as Polymorphic and Metamorphic code.
- **Integrated OS Security:** Provides fundamental context by linking malware analysis directly to OS Security concepts, including principles like integrity, confidentiality, and availability, and various system threats.
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## Mastering MERN(Full-Stack Web Development Simplified)

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## Product Description

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Welcome to Mastering MERN: Full-Stack Web Development Simplified. This book provides a seamless, structured journey into building dynamic, single-page applications (SPAs) using MongoDB, Express.js, React.js, and Node.js. Its core purpose is to bridge the gap between front-end and back-end technologies, empowering you to build end-to-end applications using a single programming language: JavaScript.

Readers will establish a strong foundation in JavaScript before diving into backend data management with MongoDB and Mongoose. The journey continues with front-end UI development using React, followed by constructing robust RESTful APIs with Node.js and Express.js.

Designed for students, aspiring software engineers, and professional developers, this book takes you from foundational JavaScript concepts to advanced API construction. It culminates in a hands-on integration of CRUD operations across the entire MERN stack, ensuring your theoretical knowledge translates directly into real-world application development.

### Salient Features

- **Foundational JavaScript Concepts:** Master essential language mechanics, including variables, control flow, array methods, and modern functions, providing a robust base for full-stack logic.
- **MongoDB Data Modeling:** Utilize Mongoose to design flexible NoSQL schemas, enforce data structures, and handle complex one-to-many or many-to-many database relationships.
- **React Component Architecture:** Break down complex user interfaces into reusable, self-contained functional or class components while ensuring predictable unidirectional data flow via props.

- **State Management Mastery:** Efficiently control dynamic application data and handle side effects using modern React Hooks like `useState`, `useEffect`, and `useReducer`.
- **Robust Backend Development:** Leverage the event-driven, single-threaded, and non-blocking I/O model of Node.js to create highly scalable, performant server-side architectures.
- **RESTful API Construction:** Simplify server logic using Express.js to seamlessly manage middleware, process form data, and route varying HTTP requests and responses.
- **Full-Stack CRUD Integration:** Bridge the gap between distinct technologies by building a fully functional application that integrates a React frontend with a backend API.

## Author

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