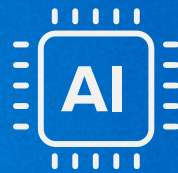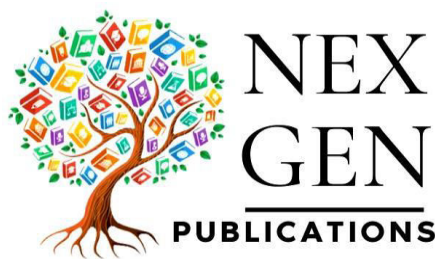# Mastering the Age of ai

A Comprehensive Guide to Intelligent Computing

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Mastering the Age of AI: A Comprehensive Guide to Intelligent Computing

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Preface

The 21st century has ushered in an era defined by rapid technological innovation, and at the heart of this transformation lies Artificial Intelligence (AI). Mastering the Age of AI: A Comprehensive Guide to Intelligent Computing has been conceived to serve as a roadmap for navigating this remarkable shift. The idea behind this book stems from a growing recognition that AI is no longer a futuristic concept confined to research laboratories—it is now a practical, everyday reality influencing our homes, workplaces, and societies at large.

This book aims to demystify AI for readers of diverse backgrounds, from students and professionals to policymakers and enthusiasts. It is designed to strike a balance between technical depth and accessibility, presenting complex concepts in a way that is both clear and engaging. Covering topics such as machine learning, neural networks, ethical considerations, and the future of intelligent systems, the book offers a holistic understanding of AI's foundations and its potential applications.

Equally important, this work explores the challenges and debates surrounding AI, including data privacy, algorithmic bias, and the socioeconomic implications of automation. By doing so, it encourages readers not only to learn about AI but also to critically engage with the questions it raises for humanity.

This book is the product of extensive research and reflection on the evolving relationship between technology and society. It is my hope that it will inspire readers to embrace AI not just as a tool, but as a transformative force that must be guided responsibly and ethically. Together, we can ensure that the age of intelligent computing is one that empowers rather than excludes, innovates while preserving human values, and builds a more inclusive, sustainable future.

Acknowledgement

The creation of Mastering the Age of AI: A Comprehensive Guide to Intelligent Computing has been a truly collaborative journey, and as co-authors, we wish to express our heartfelt gratitude to everyone who supported us in bringing this book to life.

First, we collectively extend our deepest appreciation to our mentors, professors, and academic guides, whose insights and encouragement have been instrumental throughout this process. Their intellectual guidance helped us navigate the complexities of artificial intelligence and offered clarity when we faced conceptual challenges.

We also wish to acknowledge the contributions of countless researchers, innovators, and thought leaders whose pioneering work in AI, machine learning, and intelligent systems forms the very backbone of this book. Their published research, case studies, and critical debates provided us with the material needed to present a comprehensive and balanced perspective on this rapidly evolving field.

Our sincere thanks go to our colleagues and peers for their valuable suggestions, constructive criticism, and engaging discussions that sharpened our understanding and enriched the quality of the content. The collaboration of multiple minds has been one of the most rewarding aspects of this endeavor.

On a personal note, each of us expresses gratitude to our families and close friends, whose patience and encouragement allowed us to dedicate the necessary time and energy to this project. Their unwavering belief in our work has been a constant source of motivation.

Finally, we thank you, the readers, for your curiosity and commitment to understanding the age of AI. It is our shared hope that this book empowers you to think critically, engage meaningfully, and contribute to shaping the future of intelligent computing.

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Dr. D. Maheshwari
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About the Authors

Dr. Biru Rajak has completed his master's and Ph.D. in computer science and engineering from MNNIT Allahabad. He has four years of experience in the IT industry at world top class MNC and 8+ years of teaching experience in Govt College. Apart from this, he has more than six patents and twelve international publications in reputed journals. Dr. Biru Rajak presents a thorough exploration of the latest developments and breakthroughs in the field of computer science and innovation. With his extensive expertise and research contributions, Dr. Rajak delves into key topics ranging from foundational principles to cutting-edge advancements, providing readers with a comprehensive understanding of the discipline's evolution.

Dr.A.Muthusamy is currently working as an Assistant Professor, Department of Computer Technology, Kongu Engineering College, Erode. He received his Ph.D. degree in Computer Science from Bharathiar, University, Coimbarore. He received his master degree in M.C.A from K.S.R. College of Engineering affiliated to Anna University, Chennai. He received his bachelor degree in B.Sc. Computer Science from Sri Kandhan College of Arts and Science affiliated to Periyar University, Salem. Having 14 years of experience in Teaching & Research and 3 years of experience in IT sectors. Life time member ISTE, IIT (D) campus, New Delhi, Microsoft, USA. His area of research includes Data Mining and Text Mining. He is a Reviewer of 40 National / International Journals, IEEE & Springer conferences. An inspired writer, he has authored 23 Research papers, 2 Patent, 9 Book

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Dr. D. Arivazhagan He has been in teaching for the past twenty three years handling various management and Information technology related subjects. He did his Ph.D. in Marine Human Resource and Information Technology. Also he has 6 years of Industry experience with various platforms and programming. Before joining this organization, he worked for Main Street Networks, CA to develop Utilities Management System using Java, EJB, JSP, J-Script, Style sheet, XML, SYBASE, and HTML & worked in Unix, MVS, Windows NT, Novell NetWare and MS-DOS Operating Systems, also coded in CGI, Perl, Cold fusion and JDBC. His strengths include creativity, project design implementation, project analysis and quick learning of new languages/packages. He has guides Research Scholars and published many papers in National and International Journals. . He worked as the head of the Department of Marine Information Technology and as Additional Controller of Examination in the Department of Examination. At present working as Professor in AMET Business School and Director e-governance.

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