

# ARTIFICIAL INTELLIGENCE

— AND —

# EMERGING TECHNOLOGIES:

Bridging Management Strategy  
and Engineering Innovation



**Mr. Manish Gulyani**



**Dr. Pooja Gupta**



ARTIFICIAL  
INTELLIGENCE  
ADOPTION



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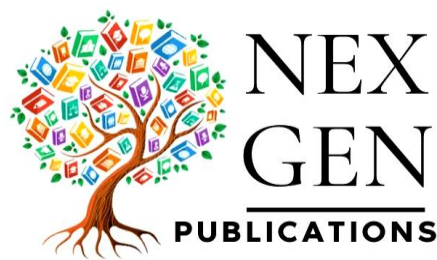
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# Artificial Intelligence and Emerging Technologies: Bridging Management Strategy and Engineering Innovation



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# Artificial Intelligence and Emerging Technologies: Bridging Management Strategy and Engineering Innovation

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## Preface

The rapid evolution of Artificial Intelligence (AI) and emerging technologies has fundamentally reshaped the contours of modern business, engineering systems, and organizational strategy. From intelligent automation and data-driven decision-making to advanced robotics, cloud computing, and Internet of Things (IoT) ecosystems, these technologies are no longer peripheral innovations; they have become central to competitive advantage, operational efficiency, and sustainable growth across industries.

The edited book titled “*Artificial Intelligence and Emerging Technologies: Bridging Management Strategy and Engineering Innovation*” is conceived as an interdisciplinary scholarly effort to integrate perspectives from management, engineering, data science, and information systems. The core objective of this volume is to explore how AI-driven innovations are transforming strategic management practices while simultaneously influencing engineering design, infrastructure development, and technological ecosystems.

This book brings together contributions from researchers, academicians, industry practitioners, and domain experts who critically examine both theoretical frameworks and practical applications of AI and emerging technologies. The chapters included in this volume address a wide spectrum of themes, including intelligent decision systems, digital transformation strategies, smart manufacturing, predictive analytics, cybersecurity, sustainable engineering solutions, and AI-enabled business models.

A key emphasis of this work is the bridging of two traditionally distinct domains—management strategy and engineering innovation. In today’s interconnected digital economy, strategic decisions are increasingly dependent on technological capabilities, while engineering solutions are being shaped by managerial priorities such as cost efficiency, scalability, ethical considerations, and customer-centricity. This edited volume highlights this convergence and aims to provide a holistic understanding of how organizations can effectively harness AI and emerging technologies for value creation.

The editors sincerely acknowledge the valuable contributions of all authors who have shared their research insights and practical experiences. Their scholarly work enriches the academic discourse and provides meaningful direction for future research in this rapidly evolving field. We also extend our gratitude to reviewers and contributors who ensured the academic rigor and quality of the chapters included in this volume.

We hope this book serves as a significant reference for researchers, postgraduate students, industry professionals, and policymakers who are engaged in understanding and implementing AI-driven transformation strategies. It is our earnest expectation that the insights presented herein will inspire further innovation and foster deeper collaboration between management and engineering disciplines.

**Mr. Manish Gulyani**

**Dr. Pooja Gupta**

## Acknowledgement

The successful completion of this edited book, “*Artificial Intelligence and Emerging Technologies: Bridging Management Strategy and Engineering Innovation*,” is the result of the collective effort, support, and encouragement of many individuals and institutions to whom we express our sincere gratitude.

First and foremost, we extend our heartfelt thanks to all the contributing authors. Their scholarly contributions, innovative ideas, and rigorous research efforts have significantly enriched this volume. Each chapter reflects deep academic insight and practical relevance, making this book a valuable addition to the field of Artificial Intelligence and emerging technologies.

We are deeply grateful to the reviewers for their time, critical evaluation, and constructive feedback, which helped enhance the quality and academic rigor of the manuscripts included in this book. Their expert suggestions played a vital role in refining the content and ensuring its scholarly relevance.

We also acknowledge the support of our academic institutions and departments for providing the necessary environment, resources, and encouragement to undertake and complete this editorial work. Their continuous motivation and academic culture have been instrumental in shaping this endeavor.

Special appreciation is extended to publishers, editorial staff, and technical teams who assisted in the compilation, formatting, and publication process of this volume. Their dedication and professionalism ensured the smooth execution of the publication process.

We are indebted to our family members and well-wishers for their unwavering support, patience, and encouragement throughout the preparation of this book. Their constant motivation has been a source of strength during this academic journey.

Finally, we hope that this edited book will serve as a meaningful contribution to the academic community and inspire further research and innovation at the intersection of Artificial Intelligence, management strategy, and engineering advancements.

**Mr. Manish Gulyani**

**Dr. Pooja Gupta**

## About the Editors



**Dr. Pooja Gupta** is an Associate Professor at the Panipat Institute of Engineering and Technology, Samalkha, Haryana. She is a seasoned management professional with over 16 years of academic experience, specializing in Finance, Banking, and Accounting.

She earned her Ph.D. from Guru Jambheshwar University, Hisar, with a research focus on Foreign Investors and the Stock Market. Dr. Gupta has made significant contributions to academic research, with numerous publications in reputed national and international journals, and has actively participated in various conferences and seminars.

In addition to her research work, she has served as an editor for more than five academic books and has authored four books in her area of expertise. Her academic and research pursuits reflect a strong commitment to advancing knowledge in the field of finance and management.



**Mr Manish Gulyani** is an accomplished academician with over 17 years of teaching experience in Management Education. He specialises in Business Statistics, Operations Research, Corporate Finance, and Accounting for Managers. He currently serves as Assistant Professor and Admission Co-Convener (MBA/BBA) at Panipat Institute of Engineering & Technology (PIET).

He is pursuing his PhD in Business and Management Studies from Maharishi Markandeshwar University, Mullana, with expected completion in December 2026. Alongside teaching, he actively contributes to academic administration, admissions, alumni engagement, and accreditation processes (NAAC/NBA).

Mr Gulyani has published research papers in Scopus-indexed and peer-reviewed journals and has presented at national and international conferences. He also holds a published patent. He has coordinated academic conferences, faculty development programs, and management events, reflecting his strong commitment to academic excellence and student development.

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## ABOUT THE BOOK

*Artificial Intelligence and Emerging Technologies: Bridging Management Strategy and Engineering Innovation* explores the transformative impact of Artificial Intelligence (AI) and emerging technologies on modern business, industry, and society. The book examines how organizations can leverage AI, machine learning, data analytics, the Internet of Things (IoT), blockchain, automation, and digital transformation to enhance decision-making, operational efficiency, and innovation.

By integrating perspectives from management and engineering, this volume highlights the critical role of technology in shaping strategic planning, business competitiveness, and sustainable growth. It discusses contemporary challenges, opportunities, and real-world applications across various sectors, providing valuable insights for academicians, researchers, industry professionals, entrepreneurs, and policymakers.

Designed to bridge the gap between technological advancement and managerial practice, the book serves as a comprehensive resource for understanding how emerging technologies are redefining organizational strategies and driving innovation in the digital era.



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