

PREFACE TO THE EDITION

The forthcoming issue of the **International Journal of Information Technology Research Studies (IJITRS)** presents a comprehensive exploration of core and emerging domains in information technology, reflecting the discipline's rapid evolution and expanding influence across sectors. The articles in this volume collectively bridge foundational concepts with applied insights, offering both theoretical clarity and practical relevance for researchers, practitioners, and technology leaders.

A central theme of this issue is the translation of complex computational concepts into real-world solutions. The opening contribution demystifies *machine learning* by grounding its core paradigms supervised, unsupervised, and reinforcement learning in accessible, real-world applications such as healthcare diagnostics, recommendation systems, and autonomous technologies. By mapping the complete machine-learning lifecycle, the study underscores the importance of data quality, interpretability, and ethical considerations in responsible AI deployment.

Strategic alignment between technology and organizational goals forms another key focus of this issue. The article on *IT performance measurement* critically examines traditional evaluation metrics and proposes a multidimensional KPI framework that captures financial impact, customer value, internal processes, and organizational learning. The findings reinforce the growing recognition that IT success must be measured not only through efficiency but through sustained value creation and strategic contribution.

Software engineering challenges are addressed through a nuanced discussion of *technical debt*, reframing it as a strategic management concern rather than a purely technical flaw. By emphasizing continuous refactoring, informed decision-making, and cross-functional collaboration, the study highlights how organizations can balance short-term delivery pressures with long-term system sustainability.

Data-driven decision-making is further examined through a detailed *comparative analysis of business intelligence platforms*, including Tableau, Power BI, and emerging alternatives. By evaluating visualization capabilities, performance, scalability, and integration, the research provides practical guidance for enterprises seeking BI solutions aligned with their analytical maturity and infrastructure.

The issue concludes with an in-depth exploration of *edge computing*, a paradigm reshaping distributed systems by enabling real-time processing closer to data sources. The study highlights substantial gains in latency reduction, bandwidth efficiency, and data sovereignty, demonstrating why edge architectures are increasingly critical for sectors such as healthcare, manufacturing, smart cities, and transportation.

Together, the articles in this issue reflect IJITRS's commitment to advancing information technology research that is rigorous, relevant, and responsive to real-world challenges. The editorial board extends its sincere appreciation to the authors and reviewers whose contributions have shaped this volume. We hope this issue stimulates informed discourse, practical innovation, and continued research in the dynamic field of information technology.

Dr. Sr. Mini T V

Chief Editor

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