PREFACE TO THE EDITION

The forthcoming issue of the **International Journal of Information Technology Research Studies (IJITRS)** brings together a compelling collection of research contributions that reflect the rapid evolution and interdisciplinary nature of contemporary information technology. The selected articles collectively address critical challenges in software engineering, artificial intelligence, cybersecurity, urban informatics, healthcare analytics, and digital governance, underscoring the transformative role of intelligent and data-driven systems in shaping modern society.

A notable theme in this issue is the integration of advanced artificial intelligence techniques into traditional domains. The exploration of large language models for automated software test generation represents a significant advancement in software quality assurance, demonstrating how AI can enhance not only efficiency but also the readability and semantic depth of generated test cases. Similarly, the hybridization of machine learning approaches, as seen in the RF-CNN framework for GIS-based land-use modeling, highlights the growing importance of combining spatial intelligence with predictive analytics to support sustainable urban development in the face of rapid environmental change.

Privacy and security emerge as central concerns across multiple contributions. The proposed federated learning framework for healthcare analytics exemplifies how cutting-edge techniques can reconcile the need for collaborative data utilization with stringent privacy requirements. In parallel, the development of edge-based security architectures for IoT-enabled smart cities reflects a shift toward decentralized, real-time threat detection mechanisms capable of addressing the scale and complexity of modern cyber-physical systems.

The blockchain-based self-sovereign identity framework for e-governance presents a forward-looking approach to digital identity management, emphasizing user autonomy, security, and decentralization in public digital infrastructures.

Collectively, the articles in this issue not only showcase methodological innovations but also emphasize practical applicability and societal impact. They reflect a broader shift toward intelligent, secure, and human-centric computing systems that address real-world challenges across diverse domains.

The editorial board extends its appreciation to all authors, reviewers, and contributors for their dedication and scholarly rigor. It is our hope that this issue will inspire further research, foster interdisciplinary collaboration, and contribute meaningfully to the advancement of information technology research.

Dr. R. Pugazhenthi
Chief editor

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