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Special Issue on

Statistical & Mathematical Modelling for AI-Driven Intelligent Systems in IoT and its Computation Challenges (Part-B)

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FOREWORD

Advances in Internet of Things (IoT) and its applications in real life have revolutionalized the way human beings interact with machines, enabled the integration of sensors, devices, and systems to collect and exchange data. AI-driven intelligent systems in IoT rely heavily on statistical and mathematical modeling to analyze and interpret complex data, making informed decisions and taking actions. However, these systems face significant computational challenges that must be addressed to ensure efficient and effective operation. There is a great need to optimize these operations and processes, so that technology enabled human life can become much better. Researchers have made significant efforts to develop solutions that optimize the process of IoT data and its analysis process.

The special issue on "Statistical & Mathematical Modelling for AI-Driven Intelligent Systems in IoT and its Computation Challenges" consolidates state-of-the-art research and upcoming trends in the unification of AI models, statistical methods, and mathematical models adopted for IoT-based intelligent systems. The objective is to resolve computational challenges, real-time processing and optimization problems involved in implementing AI in intelligent networked systems.

This special issue features cutting-edge research towards opportunities and challenges in intelligent IoT systems, with focus on novel studies in AI-based decision making, intelligent sensors, real-time data modeling, system-level simulations, and statistical optimizations.

This special issue is an outcome of the 6th International Conference on Information Management & Machine Intelligence held at Poornima Institute of Engineering & Technology, Jaipur on 23-24 Dec 2024, wherein

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we received more than 250 papers during the conference which went through a rigorous peer review process after which 41 papers have been selected for publication in this issue.

The guest editors appreciate the contribution of authors and critical feedback of reviewers. We take this opportunity to especially thank Prof. B. K. Dass, Chief Editor, for encouraging us and facilitating publication as a special issue of the prestigious *"Journal of Information and Optimization Sciences"* brought out by Taru Publications, New Delhi. We are hopeful that this work would be accepted as a forerunner to further such works and prompt research and interaction in these crucial areas.

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