



ICAIN-2026

International Conference on Artificial Intelligence and Networking

26th -28th November 2026
Organized by
Universal Innovator & UI-Educon
In association with
Indian Institute of Information Technology, Allahabad

******* CALL FOR PAPERS *******

SPECIAL SESSION ON

AI-Driven Precision Medicine and Predictive Healthcare Analytics

SESSION ORGANIZERS:

Session Chair: Dr. Sanjeevkumar Angadi

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SESSION DESCRIPTION:

This special session focuses on the transformative role of Artificial Intelligence (AI) and Machine Learning (ML) in enabling **precision medicine and predictive healthcare analytics**. By leveraging large-scale clinical data, genomics, medical imaging, electronic health records (EHRs), and wearable sensor data, AI-driven models can deliver personalized treatment strategies, early disease prediction, and data-informed clinical decision support.

This special session explores advanced AI-driven methodologies that support early disease detection, risk stratification, treatment response prediction, and outcome optimization. Predictive healthcare analytics integrates deep learning, ensemble models, time-series forecasting, and multimodal data fusion to identify patterns that may not be visible through conventional statistical techniques. These technologies are increasingly applied in chronic disease management, oncology, cardiovascular risk prediction, neurological disorder assessment, and population health monitoring.

The session also emphasizes key challenges such as data heterogeneity, model interpretability, bias mitigation, regulatory compliance, privacy preservation, and ethical deployment in clinical settings. Contributions addressing federated learning, explainable AI, secure health data sharing, and real-world validation studies are particularly encouraged.

By fostering interdisciplinary collaboration among AI researchers, clinicians, healthcare administrators, and industry innovators, this session aims to promote scalable, patient-centric, and sustainable AI solutions that enhance healthcare quality, accessibility, and efficiency, including but not limited to:

RECOMMENDED TOPICS:

- Federated and Privacy-Preserving Learning for Healthcare Analytics
- AI-Driven Precision Oncology & Personalized Cancer Treatment
- Transformer and Foundation Models for Electronic Health Records (EHRs)
- Digital Twin Models for Personalized Healthcare Simulation
- Explainable AI for Clinical Decision Support Systems (CDSS)
- AI for Drug Response Prediction and Pharmacogenomics
- Real-World Evidence Analytics Using Multimodal Healthcare Data

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this particular theme session on **AI-Driven Precision Medicine and Predictive Healthcare Analytics on or before [30th August 2026]**. All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at <https://www.icain-conf.com/downloads>. All submitted papers will be reviewed on a double-blind, peer-review basis.

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