

Special Session
on
“Healthcare: Cyber Security, Bioinformatics and AI Perspective”

The special session “Healthcare: Cyber Security, Bioinformatics and AI Perspective” is designed to describe the fundamental concepts of Machine Learning, blockchain and security and its application in healthcare.

Researchers working in cyber security, medical imaging and healthcare rely on the expertise of clinicians who play a significant role in understanding complex medical data for diagnosis of diseases. Automation of diagnosis procedures for various healthcare problems may help in improving patient care and overall healthcare. Recently, advanced machine learning methods have shown promising results in biomedical and healthcare applications. Therefore, there is a need to explore novel learning methods, optimization and inference techniques for processing biomedical and healthcare data to get performance closer to clinical diagnosis. Advances in machine learning can be used to develop sophisticated and novel applications in the field of biomedical and healthcare domains. This will attract healthcare practitioners who have access to interesting sources of data but lack the expertise in using machine learning techniques effectively. Special attention will be devoted to handling feature selection, class imbalance, model robustness, scalability, distributed and heterogeneous data sources, and data fusion in biomedical and healthcare applications.

Topics

The special session presents a well-adjusted view of Bioinformatics (BI), Machine Learning (ML), Cyber Security (CS) as well as Internet of Things (IoT), including Information fusion and knowledge transfer in biomedical and healthcare applications; Information retrieval of medical images; Imaging sensing tools, technologies and applications in biomedical research; Body motion and pose detection in biomedical imaging; Computer aided detection and diagnosis, especially for cancers; Transfer learning in medical imaging; Adversarial training in medical imaging; Medical image reconstruction; Knowledge-assisted image processing; Domain adaptation in medical imaging; Content-based information retrieval; Medical image compression; Distributed training, learning, and inference for biomedical and healthcare data; Distributed model optimization for biomedical and healthcare data; Federated learning for biomedical and healthcare data.

The paper in this special session provides an in-depth coverage of Bioinformatics, Cyber Security and Machine Learning perspective along with IoT in the field of healthcare applications.

Session Chairperson

Dr Gaurav Gupta

Associate Professor, IEEE Senior Member (92959693), IEEE CS Member, IAENG member
Yogananda School of Artificial Intelligence Computers and Data Science,

Shoolini University,

Oachghat-Kumarhatti NH, Bajhol, Solan Himachal Pradesh, INDIA – 173229

Email solan.gaurav@gmail.com ; gaurav@shooliniuniversity.com

(M) +91 9817452559

Session Co-Chairs

Dr CH Vanipriya

Associate Professor

Sir M Visvesvaraya Institute of Technology, Krishnadevaraya Nagar, Hunasamarahalli,
International Airport Road, Bangalore – 562157

Email vanipriya_is@sirmvit.edu

Pradeep Chintale

SEI Investment Company, PA, USA

chintale.pradeep@gmail.com

+1 267-990-8408