



Session Title: Fusion of Bigdata analytics, artificial intelligence and Blockchain in Fog-based IOT applications

Session Chairs:

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AIM & Scope:

Fog computing is a conceptual paradigm that provides the methodologies and characteristics of cloud computing (such as virtualization, multitenancy etc.) to the edge of the network. With the advent of low latency and location aware IoT applications, fog computing model becomes a viable alternative for designing Internet of Things (IoT) applications. The Internet of Things (IoT) refers to a networked system of connected things/devices that are capable of transmitting data without human intervention. IoT systems are increasing day by day and are projected to reach 80 billion by 2025. In order to deduce the meaning of the data and use it for decision-making for business growth, this huge amount of data needs to be handled smartly. There is a need to go hand in hand with big data analytics and IoT. It is also necessary to protect the data generated by IoT devices by providing security mechanisms to prevent data misuse. Due to the complex and diverse nature of devices used to perform the task, data generated by IoT devices is highly susceptible to security risks. IoT devices are vulnerable to attacks and can cause danger at higher levels once compromised because antivirus software cannot be installed on devices to protect against malicious operations due to the devices' low- memory and low-power nature. Blockchain technology is a distributed ledger that enables data to be exchanged securely between parties and can be implemented effectively to ensure system protection. Artificial Intelligence refers to a set of methodologies that, when applied to the fields of healthcare, retail, manufacturing and banking, can imitate human intelligence. By building a machine learning model with the help of Artificial Intelligence algorithms, machines can be allowed to learn from the data generated by IoT devices. It provides the ability to classify patterns and discover anomalies in the data generated by devices and associated sensors. The aim of this workshop is to provide a venue for these diverse groups to come together to promote the development of big data for the next generation.

TOPICS OF INTEREST (INCLUDE BUT NOT LIMITED TO)

- Architecture of convergence of cognitive computing and big data analytics
- Architecture design for AI in fog-based IoT
- AI based techniques for data driven trustworthy fog-based IoT
- Emerging applications of AI, bigdata and blockchain in IoT implementation of security in IoT using blockchain technology.
- Big data analysis and Fog computing
- Emerging applications via fog intelligence
- Novel applications for fog intelligence such as autonomous driving, Industry 4.0, networked robots, networked UAV, smart grid etc.



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- Artificial Intelligence and Cloud, Fog and Edge Computing
- Internet of Things based fog Architecture and Its Applications
- Big Data Analytics of Internet of Things based Cloud Systems
- Security, Privacy and Trust issues in AI Based Fog and IoT based Systems
- Blockchain Based Solutions for AI Based fog based IoT Systems
- Machine learning and Deep learning in Fog based IoT
- Smart cities, Smart transportation and Smart Health
- Security and privacy for smart IoT or CPS
- Applications of Bigdata in alleviating natural disasters, pandemic diseases, ensuring road safety mitigating environmental pollution

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