

Special Issue on
**Artificial Intelligence for Urban Internet of
Things**

CALL FOR PAPERS

Artificial Intelligence (AI) is playing a crucial role in Urban Internet of Things (Urban IoT) systems. AI aims to leverage computers and algorithms to intelligently process and analyze data from different sources, thus mimicking the problem-solving and decision-making capabilities of the human mind. Existing artificial intelligence methods have shown promising performance in computer vision, natural language processing, reasoning, and speech recognition. Urban IoT is a network of physical objects embedded with electronics, software, sensors, and network connectivity, which enables these objects to support city-scale data collection and processing. With the wide adoption and quick development of Urban IoT, the users, sensors, and networks generate a tremendous amount of data.

However, Urban IoT is extremely complicated because of the enormous scale, heterogeneity, high dynamic nature, and inherent uncertainty. Therefore, exploring how to effectively utilize AI to power Urban IoT is becoming a more significant research topic. AI in Urban IoT systems must overcome the many challenges and exceptional requirements for connectivity, latency, scalability, accessibility, security, and resilience. Therefore, the seamless integration of AI into Urban IoT systems creates tremendous opportunities for new research and necessitates more diversified efforts to address these challenges in practice.

The aim of this Special Issue is to collate articles with a focus on challenging issues in the combination of AI and Urban IoT, including technologies, algorithms, frameworks, architectures, and application. Both theoretical and experimental contributions containing novel applications with new insights and findings are welcome. Review articles which detail the current state of the art are also welcome.

Potential topics include but are not limited to the following:

- ▶ AI methods for analyzing uncertain sensor data in Urban IoT systems
- ▶ AI problems while analyzing massive amounts of sensor data in Urban IoT systems (novel clustering and classification methods)
- ▶ Cooperative and collaborative data processing in Urban IoT systems (e.g., multiagent systems, in-network processing approaches)
- ▶ AI methods for multimodal data analytics in Urban IoT systems
- ▶ AI methods to manage and improve information security in Urban IoT systems
- ▶ AI methods for intention analysis in Urban IoT systems
- ▶ Explainable AI methods for Urban IoT systems
- ▶ Ubiquitous and pervasive computing in Urban IoT systems
- ▶ Distributed computing in edge nodes for Urban IoT systems
- ▶ Distributed learning in edge nodes for Urban IoT applications

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=441782>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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