Special Issue on AI-Driven Smart Networking and Communication for Personal Internet of Things, Part I

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With the rapid development of personal computing technology and intelligent devices, the Internet of Things (IoT) industry has reached a new level for consumers. Compared with the conventional IoT, Personal IoT integrates various ubiquitous networking, communication, sensing, and control capabilities, as well as intelligent analysis and decision technologies, into all aspects of personal daily life process. Nowadays, artificial intelligence (AI) facilitates ubiquitous smart networking and communication, application analysis and prediction, and thus to make an optimal decision. The basic idea of Personal IoT is to leverage a multitude of collaborative ubiquitous personal smart devices and near-user infrastructures to carry out a substantial amount of personal data retrieval, recognition, compression, and communication tasks with low latency, energy efficiency, and many other desirable features.

Despite tremendous benefits and opportunities that the AI offers, there are still many technical challenges that need to be addressed by the research and development communities to realize the full potentials of the Personal IoT. The goal of this special issue is to attract high quality contributions that collectively provide a comprehensive coverage of recently developments related to the AI-driven Personal IOT technology and applications.

The papers published in this special issue are accepted through an open call for papers. The submitted manuscripts were reviewed by experts from both academia and industry. This special issue will be published by International Journal of Wireless Information Networks in two parts. The first part of the special issue includes eight papers and more papers will be published in the second part of this special issue.

The paper “Jitter Buffer Control Algorithm and Simulation Based on Network Traffic Prediction” by *Minglan Yuan*, proposed an adaptive jitter buffer control algorithm based on network traffic prediction to reduce buffer delay and packet loss and to improve the speech quality of Voice over Internet Protocol. The paper “Wireless Network Attack Defense Algorithm Using Deep Neural Network in Internet of Things Environment” by *Xifeng Wang* and *Xiaoluan Zhang*, designed a wireless network attack defense method using deep neural network combined with game models. The paper “A Data Security Storage Method for IoT Under Hadoop Cloud Computing Platform” by *Yuqing Mo*, proposed the system architecture of the distributed file system and an enhanced ant colony algorithm for data storage. The paper “Image Processing Algorithms of Hartmann Aberration Automatic Measurement System Based on Tensor Product Network” by *Yi-bing Chen*, studied a set of image processing algorithms based on the Hartmann aberration automatic measurement system.

The paper “Node Attributed Query Access Algorithm Based on Improved Personalized Differential Privacy Protection in Social Network” by *Xiaobo Yin*, *Shunxiang Zhang* and *Hui Xu*, investigated the influence of both social network attribute graph node properties and the correlation of edge information under the condition of considering the user privacy requirements. The authors proposed a social network attributes graphs algorithm under personalized differential privacy. The paper “Effective Application of Naive Bayesian Classifier for Personal Online Learning Networks” by *Deyan Wang*, *Amritl Jaharadak Adam*, *Ying Xiao*, and *Ya Gao*, studied the relationship between course achievement and employment salary by adopting the Quantitative method as main

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methodology. The paper “Intelligent Classification Method of Remote Sensing Image Based on Big Data in Spark Environment” by Zhichao Xing and Guangming Li, improved the traditional image classification technology based on K-means algorithm, and proposed a new hyperspectral image clustering method combined with spectral clustering method. The paper “Research on Privacy Protection of Large-Scale Network Data Aggregation Process” by Yuelin Zou, Wei He, Longjun Zhang, Jiati Ni and Qiang Chen, proposed an Privacy Protection Algorithms (PPA) based on large-scale network data aggregation for the shortcomings of the existing standard large-scale network data aggregation algorithm with low time efficiency and poor reversibility.

We would like to thank all reviewers who have helped in the paper review process, and the authors for their contribution and efforts to complete the papers with a very high quality. Finally, we express our gratitude to Dr. Kaveh Pahlavan for initiating this special issue and inviting us to undertake this rewarding activity.

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