Journal of Network Intelligence

Special Issue: Artificial Intelligence and Powered Human-centric Computing

In the past decade, human-centric computing (HCC) has emerged as a cross-disciplinary research domain that enables the effective integration of various human-related computational elements, benefiting the interactions and collaborations among the physical devices, cyber space and people significantly. Through intelligent HCC techniques, software and hardware engineers can develop various human-computer applications conveniently to satisfy the users' sophisticated functional and non-functional requirements.

However, HCC applications have been generating an unprecedented volume of industrial data and therefore, require the support of powerful computing and storage infrastructures. Fortunately, modern computing paradigms, e.g., cloud and edge, provide a promising way to provision HCC applications the cloud/edge resources in an economic and flexible manner. The adaption of cloud/edge computing to HCC applications is a fundamental challenge and raise a variety of issues, e.g., time-efficient data transmission, energy-aware resource offloading, secure communications & collaborations, and so on.

Recently, Artificial Intelligence (AI) has emerged as one of the key technologies to realize intelligent cloud/edge data processing. AI algorithms have the capability to process the streaming data generated at cloud/edge networks, and provide powerful tools to deal with complex big data analytics. Therefore, the adaptation of AI-based methods is highly demanded to achieve their full potentials in cloud/edge-based HCC applications. The security and privacy issues also call for efforts in order to guarantee service quality delivered by cloud/edge-based HCC applications.

Topics include, but are not limited to, the following:

- Human-centered semantic analyses in Cloud/Edge
- Knowledge-driven human-computer interaction in Cloud/Edge
- Collaborative systems and decisions in Cloud/Edge
- Intelligent big data analyses in HCC with Cloud/Edge
- AI powered smart applications
- Intelligent interfaces and user modeling with big data and AI
- Collaborative systems and decisions in AI and big data
- Novel applications based on big data
- Energy-aware offloading methods for management with big data and AI
- Management and Optimization of Multi-source data fusion in IoT and big data
- Smart service quality optimization in AI and big data
- Security architectures and protection mechanisms

Paper Submission:

All submitted manuscripts should be formatted by JNI template. An electronic version (PDF format) of the full paper should be submitted to the Lead Guest Editor Prof. Sang-Bing Tsai (sangbing@hotmail.com). The template of JNI is available at https://bit.kuas.edu.tw/~jni/information.html?0930

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