Call for Papers
Special Issue on Edge AI As-a-Service
IEEE Transactions on Services Computing

It is essential to deliver learning-based artificial intelligence (AI) capabilities through API service endpoints at the edge under the as-a-service model to meet the growing demand for integrating big data, Internet of things (IoT) and cloud computing capabilities. The edge AI services expedite making data-driven decisions (e.g., optimizing control, coordination, investment, medical services allocation, etc.). A sample research challenge addresses learning and/or inferencing efficiency of the edge AI service (or microservice) under development that meets the requirements for minimum level of quality of service (QoS), processing power, energy consumption, robustness, extensibility, and/or DevOps. Policy-based federated learning services at edge are typical edge AI use cases in which data processing and management constraints need to be considered in terms of data origin, ownership, heterogeneity, security, and privacy. 5G/6G edge nodes provide unprecedented high QoS wireless operating environments for edge AI services and related applications. This special issue aims at promoting high-quality research on recent advances in edge AI as-a-service and to inspire related research efforts.

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

- Deep learning services at edge
- Learning-based service/microservice systems running atop edge devices/nodes
- Learning-based services/microservices hosted by 5G/6G edge nodes
- Policy-based learning services at edge
- Edge-centric distributed or collaborative learning services
- Edge-centric federated learning services
- Learning based event stream processing and/or contextual data enrichment of edge services
- Learning based edge service management, optimization, and/or continuous improvement
- Learning based security, privacy, trust, and/or risk management of edge services

Important Dates

- Manuscript Submission Due: Dec. 31, 2020
- First Round Notification Due: March 31, 2020
- Revised Submission Due: May 31, 2020
- Final Decision Notification Due: June 30, 2020
- Final Manuscript Submission Due: July 31, 2020

Guest Editors

- Prof. Andrzej Goscinski, Deakin University & RMIT
- Prof. Elisa Bertino, Purdue University
- Prof. Shangguang Wang, BUPT

Paper Submission

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