



AI-empowered Edge Cloud Continuum for self-aware cognitive computing environments

The Internet of Things (IoT) has brought new opportunities for increasing safety, automation, and cost and energy savings. However, these opportunities come with an increase in data generation, which is pushing network capacity to its limits. According to an estimation by IDC, the total amount of data generated by connected devices will exceed 40 trillion gigabytes by 2025. Analyzing data closer to where it is generated, rather than sending it to a data center, can reduce network load, save energy and costs, and satisfy the requirements of low-latency applications.



Objectives

- 01** To build the architectural foundations of the Cognitive-Fog, an open, flexible, adaptive and modular edge-cloud continuum framework.
- 02** To develop the enabling technologies of the Cognitive-Fog with orchestration capabilities over heterogeneous IT resources and services, so as to form a decentralized computing continuum with real-time scalable AI-based monitoring and analytical capabilities for improved privacy, security, reliability, resilience and safety.
- 03** To empower the Cognitive-Fog with advance load balancing and energy management capabilities to significantly reduce energy consumption and cost.
- 04** To validate the Cognitive-Fog capabilities in novel use cases covering multiple and different domains and to create high impact by promoting the use of Cognitive-Fog through wide dissemination and communication (D&C) means, standardization and clustering actions and exploit its key results to ensure sustainability and trust over a wide edge ecosystem addressing diverse industries.

Consortium

