

Session 5: EU related projects

BRAINE Project - Big data pRocessing and Artificial Intelligence at the Network Edge: overview and use cases

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Abstract

This talk will provide an overview of the H2020 ECSEL BRAINE Project, started on May 1st 2020. The BRAINE consortium comprises 27 partners from 14 European countries. The BRAINE project's overall aim is to boost the development of the Edge framework and, specifically, energy efficient hardware and AI empowered software systems, capable of processing Big Data at the Edge, supporting security, data privacy and sovereignty.

BRAINE's overall aim will be reached by targeting five fine-grained goals: (1) Devising an EC infrastructure that offers control, computing, acceleration, storage, and 5G networking at the Edge for Big Data and AI in low latency and mission-critical applications. (2) Developing a future-proof Edge security framework and associated infrastructure. (3) Developing a distributed and partly-autonomous system that takes data privacy and sovereignty into account on each and every decision regarding workload placement, data transfer, and computation, while guaranteeing interoperability with the environment. (4) Developing a heterogeneous, energy efficient Edge MicroDataCenter, suitable for stationed, mobile, and embedded autonomous applications, that offers Big Data processing and AI capabilities at the Edge. BRAINE will demonstrate edge computing enabling AI through four use cases: healthcare assisted living (case 1), hyperconnected smart city (case 2), robotics in Factory 4.0 (case 3) and supply chain Industry 4.0 (case 4).