AI-SPRINT: Artificial intelligence in Secure PRIvacy-preserving computing coNTinuum

Description

For Artificial Intelligence (AI) to become fully pervasive it needs resources at the edge of the network. The cloud can provide the processing power needed for big data, but edge computing is located close to where data are produced and is therefore crucial to their timely, flexible, and secure management.

AI-SPRINT will define a framework for developing AI applications in computing continua, enabling a finely-tuned tradeoff between performance (e.g., in terms of end-to-end latency and throughput) and AI model accuracy, while guaranteeing security and privacy. AI-SPRINT outcomes include: i) simplified programming models to reduce the steep learning curves in the development of AI software in computing continua; ii) highly specialized building blocks for distributed training, privacy preservation and advanced machine learning models, to shorten time-to market for AI applications; and iii) automated deployment and dynamic reconfiguration to decrease the cost of operating AIsoftware.

Beneficiaries include AI system end-users, software developers, system integrators and cloud providers. AISPRINT tools will make it possible to consider security and privacy early in the design stage and to seamlessly manage the time-variable conditions typical of real environments. Real-world scenarios are an integral part of AI-SPRINT as they are key for guiding requirements and for developing and validating results. Industrial partners contribute three heterogeneous use cases (farming 4.0, maintenance & inspection, and personalized healthcare). Cutting-edge innovation is brought to theConsortium by four research partners with complementary expertise. Two system integrators provide their vision on relevant verticals and technology insights, one cloud provider brings real-world implementation expertise, and two specialists in dissemination ensure impact and uptake. AI-SPRINT will also pursue a sustainability path through the creation of an Alliance and Adopter Acceleration club as a marketplace for AI businesses.

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