SunRISE wins a PENTA Innovation Award 2022 with novel solutions to protect data privacy in machine learning environments

Tied winner with the CAVIAR project

Amsterdam, 25 November 2022- SunRISE, a project within the EUREKA Penta Cluster managed by Industry Association AENEAS, was today presented with a PENTA Innovation Award during the EFECS2022 event.

With more and more domains being digitized, huge amounts of often privacy-sensitive data are being collected and transferred such as in the case of cloud services and Internet of Things (IoT) applied in healthcare or energy communities. In various scenarios, it is beneficial to use sensitive data of individuals or organizations for training machine learning (ML) models. Throughout the entire process, from data collection to obtaining the learned model, the data is exposed to potential privacy threats. To mitigate these threats, The 17 partners in the SunRISE consortium created novel ML-based security and privacy solutions to increase the resilience of IT systems against these risks. The PENTA Innovation award recognises the crucial importance of this work for Europe's citizens, businesses and society.

Project leader, Leonard Püttjer from NXP Semiconductors, accepted the award on behalf of the consortium members. These comprised four large enterprises, five SMEs, three Research and Technology Organisations and four universities, from Germany, Belgium and the Netherlands. This diverse array of partners, competencies and knowledge from varied domains contributed greatly to the success of the SunRISE project.

Together the SunRISE partners developed a secure hardware architecture, an ML architecture and a communication architecture that support privacy-preserving methods (for example distributed computing or secured with homomorphic encryption). These are applicable in numerous use cases including anomaly detection, predictive maintenance, heat / energy prediction, and denial of service attacks.

Moreover, the technologies and methodologies developed in SunRISE are already being incorporated into ICs such as hardware encryption accelerators and IoT end-nodes, as well as in distributed AI solutions and ML for privacy preservation for businesses using cloud and IoT technologies. Overall, SunRISE will allow European companies and research institutes to reinforce and expand their leading market position in cybersecurity solutions. The PENTA Innovation award recognises these achievements and the social and economic value of the project.
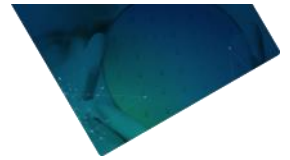
About the PENTA programme

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications. Guided by the Electronic Components & Systems (ECS) Strategic Research and Innovation Agenda (SRIA) four technology layers, four cross-sectional technologies, and six ECS key application areas, the PENTA programme enables the development of electronic solutions to help drive the digital economy through the formation of collaborative ecosystems along the ECS value chain. This creates the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. PENTA supports SMEs, large corporations, research organisations, and universities to work together in project consortia by facilitating access to funding, fostering collaborative work , and creating consortia in areas of mutual industrial and National interest. PENTA is managed by the Industry Association AENEAS

More on PENTA: http://www.penta-eureka.eu
More on AENEAS: https://aeneas-office.org

About the SunRISE project:

SunRISE is a R&I project consortium involving 16 partners. The project partners are: NXP Semiconductors (Project Leader), Ancud IT, AnyWi, Cloud & Heat Technologies, Eindhoven University of Technology**,** Engie Laborelec, Fraunhofer IIS, imec, Philips, Sandgrain, Sirris, Technical University of Munich, TU Delft, Technolution, Ulm University and Vattenfall. The project is funded by Belgium, Germany and the Netherlands.

SunRISE project website: https://www.project-sunrise.eu/