

Building Trustworthy AI Ecosystems: Examples from EU projects

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Abstract:

The European Union AI legislative framework builds upon several documents, including the *AI Act* (Regulation (EU) 2024/1689) and the *Apply AI Strategy* (COM(2025) 723 final), which shall provide opportunities to boost innovation, create a strong industrial base and a vibrant startup ecosystem by adopting the latest AI technologies. The academic community, either as developers or users of the EU AI Factories infrastructure, or providers of common rules, standards, AI services and domain-specific solutions for the emerging EU Data Spaces, plays an important role in this transformation process for societal and economic growth.

This talk focuses on two industrial domains (energy and healthcare) and points to lessons learned from designing, building and testing trustworthy AI services in the framework of the EU projects OMEGA-X (*Orchestrating an interoperable sovereign federated Multi-vector Energy data space built on open standards and ready for GAia-X*), InterPED (*INTEROperable cloud-based solution for cross-vector planning and management of Positive Energy Districts*) and IntelliLung (*Intelligent Lung Support for Mechanically Ventilated Patients in the Intensive Care Unit*).

The results from these projects have shown that the establishment of robust frameworks for effective data management and interpretation is essential for both domains. Ensuring interoperability and adherence to common standards is critical for seamless integration across different systems. Depending on the risk level and complexity of software system development, the scope of the testing and validation of AI-based systems varies across domains. Safeguarding data privacy and security, regulatory compliance of the AI-based services/systems, especially in the healthcare domain, remains a priority.

The ambition for building a trustworthy AI ecosystem in the framework of the Serbian AI Factory (SAIFA) project will also be presented.