

ACROBA: AI-Driven Cognitive Robotic Platform for Agile Production environments



Descripción

ACROBA project aims to develop and demonstrate a novel concept of cognitive robotic platforms based on a modular approach able to be smoothly adapted to virtually any industrial scenario applying agile manufacturing principles. The novel industrial platform will be based on the concept of plug-and-produce, featuring a modular and scalable architecture which will allow the connection of robotic systems with enhanced cognitive capabilities to deal with cyber physical systems (CPS) in fast-changing production environments. ACROBA Platform will take advantage of artificial intelligence and cognitive modules to meet personalisation requirements and enhance mass product customisation through advanced robotic systems capable of self-adapting to the different production needs. A novel ecosystem will be built as a result of this project, enabling the fast and economic deployment of advanced robotic solutions in agile manufacturing industrial lines, especially industrial SMEs. The characteristics of the ACROBA platform will allow its cost-effective integration and smooth adoption by diverse industrial scenarios to realise their true industrialisation within agile production environments.

Objetivos

The platform will depart from the COPRA-AP reference architecture for the design of a novel generic module-based platform easily configurable and adaptable to virtually any manufacturing line. This platform will be provided with a decentralized ROS node-based structure to enhance its modularity. ACROBA Platform will definitely serve as a cost-effective solution for a wide range of Industrial sectors, both inside the consortium as well as additional industrial sectors that will be addressed in the future. The Project approach will be demonstrated by means of five industrial large-scale real pilots, Additionally, the Platform will be tested through twelve dedicated Hackatons and two ACROBA On-Site Labs for technology transfer experiments.

INVESTIGADORES

Proyecto de

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DETALLES

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