



JARVIS

JARVIS PRESS RELEASE: DRIVING AI- ENCHANCED HUMAN- ROBOT COLLABORATION ACROSS EUROPE



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JARVIS is a research project funded under the Horizon Europe programme, developing AI driven tools to enhance human-robot interaction. By enabling intuitive, user-centric communication, JARVIS aims to bridge the gap between human workers and robotic systems, fostering safe, more efficient, and adaptive collaboration. The JARVIS consortium, coordinated by the Laboratory for Manufacturing Systems & Automation (LMS), brings together 16 partners from 11 European countries. By integrating expertise from research institutes, technology providers, and end-users, the project is pushing the boundaries of human-robot interaction and accelerating its industrial adoption.

"JARVIS promotes the adoption of social human-robot interaction and enhances human capabilities in complex tasks by integrating interfaces for natural communication, robot control, and programming"

The JARVIS project successfully completed its first year, marking key milestones in industrial collaboration and technical advancements.

INDUSTRY-DRIVEN PILOTS: DEFINING REAL-WORLD CHALLENGES

Our end users, including EQUINOR, EDF, COLLINS, and TOFAS welcomed the project partners at their facilities, empowering our industrial-driven analysis of obstacles and requirements for human robot interaction adoption. As key players in Agile Manufacturing and Inspection & Maintenance, they provided domain expertise and industry insights that reflect the broader needs of European industries.



Leveraging this industry feedback, our technical team has established a framework, that provides a reusable set of AI-driven multimodal interaction tools – enhancing human acceptance and augmenting capabilities in industrial environments. The framework follows a centralized architecture, with a main orchestration module responsible for maximizing the efficiency and stability of workspaces.

Currently, we are developing our key enabling modules with first prototypes expected by summer 2025. Promising results include:

- Advanced robot control based on state of the art algorithms and AI perception systems for high robot dexterity.
- Robot understanding and prediction of process state and human intention employing pattern recognition and deep learning techniques.
- Intelligent digital twins for accurate digital representation of the actual production system facilitating efficient reasoning and decision-making under dynamic conditions.

TEAMWORK AND PROGRESS

During the first year, the JARVIS consortium held three General Assembly Meetings, hosted by TOFAS, COLLINS and TF-CC. These meetings have ensured quality control across every aspect of the project and set the course for our upcoming milestones.

EVENTS & OUTREACH

JARVIS had the opportunity to participate in numerous events during the first year of the project, engaging with industry, researchers, and policymakers across Europe. At ERF2024 in Italy, JARVIS co-organised a workshop on AI-based analytics in inspection and maintenance robotics, collaborating with the RIMA Alliance and ADRA. The CECIMO Brussels Forum provided a high-level platform to discuss AI-driven human-robot collaboration with industry leaders. JARVIS also joined the European Manufacturing Conference in Brussels, where it showcased its role in shaping AI-driven industrial transformation.

Kicking off 2025, JARVIS joined the "Future-Ready: On-Demand Solutions with AI, Data, and Robotics" event in Brussels in February organised by AI-on-Demand and the AI, Data, and Robotics Association. During this event, we had the chance to present our ongoing developments, share insights on AI-driven industrial transformation and engage in fruitful discussions with the attendees, identifying challenges and opportunities for collaboration. JARVIS members discussed with the community about the project technical advancement, but also the Open Call challenges having the opportunity to collect feedback and the overall feeling of the relevant stakeholders and experts from all across Europe to explore cutting-edge ADR projects, foster collaborations, and shape future AI strategies.

NEXT STEPS

We have just launched our Open Call, which focuses on boosting companies, mainly SMEs, to adopt novel technologies facilitating human robot interaction. Within this context, JARVIS will not only fund consortia of 2 or 3 entities with up to 130 000 € for each project but will also provide mentoring and guidance to technology providers and end-users into deploying innovative solutions of high added value. The JARVIS consortium is making its digital tools accessible to the applicants of the Open Call in order to further support the advancement of the capabilities of existing solutions, while collecting valuable feedback for the JARVIS toolset.

[Check out our Open Call!](#)

