

Marie Skłodowska-Curie Actions

Research in AI

July 2025



About MSCA

With a budget of €6.6 billion for the period 2021-27, the Marie Skłodowska-Curie Actions (MSCA) is a research and training programme that supports the career, skills development, and mobility of researchers at all stages of their careers and from all over the world. The programme funds bottom-up research in all fields based on scientific excellence and competitive funding.

5 The MSCA have main actions

Doctoral Networks

implement doctoral programmes (including joint doctorates and industrial doctorates) **by international partnerships** of organisations from different sectors. They train highly-skilled doctoral candidates, stimulate their creativity, enhance their innovation capacities and boost their employability in the long-term.

Postdoctoral Fellowships

support researchers' careers and foster excellence in research and innovation. Researchers holding a PhD can carry out their research activities, acquire new skills and develop their careers abroad, whilst developing competences in non-academic sectors and working within interdisciplinary teams.

Staff Exchanges

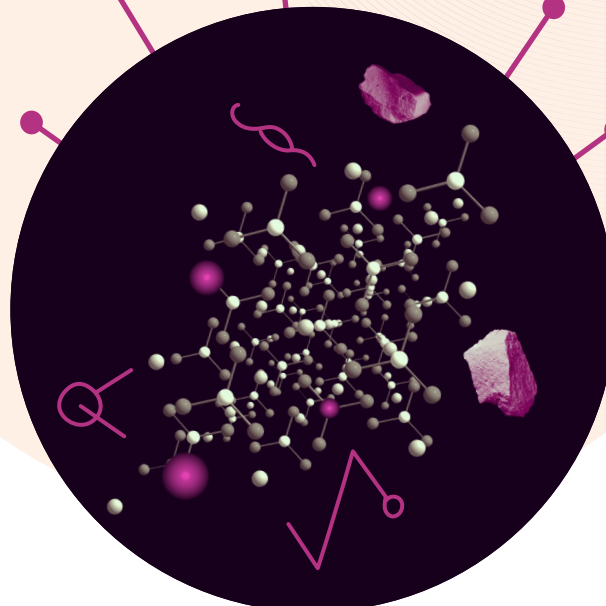
offer researchers and innovators short term international and inter-sectoral exchanges through sustainable, collaborative projects in Europe and beyond. These promote the transfer of both knowledge and skills, while also increasing organisation's capacities for research and innovation.

MSCA and Citizens

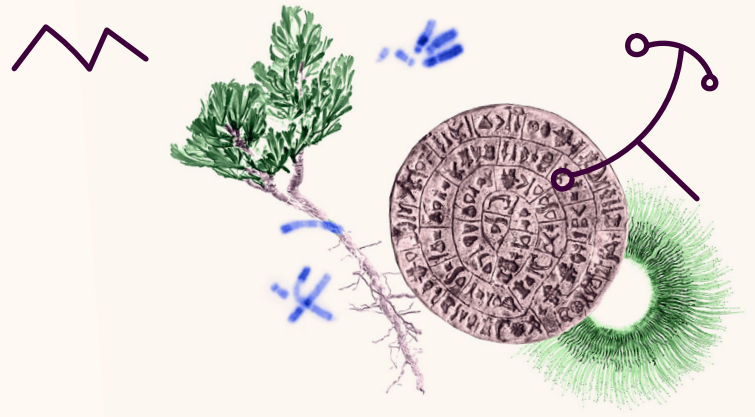
brings research and researchers closer to schoolchildren, families and the wider public at large through actions such as the European Researchers' Night - the annual research communication and promotion event taking place at the end of September across EU Member States and Horizon Europe Associated Countries.

COFUND

co-finances regional, national and international doctoral and postdoctoral programmes for researchers' training and career development. COFUND spreads MSCA's best practices by setting high standards and excellent working conditions, through international, interdisciplinary and inter-sectoral mobility.



AI in research in MSCA projects



MSCA projects and fellows have long been adopting Artificial Intelligence (AI) in their research and training process and as a research topic, contributing to its uptake by the scientific community.

Key figures:

- Under Horizon 2020 (2014-20), there were over **500** MSCA research and training projects with a strong AI component
- Halfway through Horizon Europe, there have already been over **500** funded projects with a strong AI component, providing training and career opportunities for over **2000** researchers
- In the last 10 years, the MSCA has provided over **EUR 1 billion** in funding to research and training projects with a strong AI component
- The actions with the highest share of projects in this area are MSCA Staff Exchange and MSCA Doctoral Networks, with respectively **22%** and **20%** of funded projects with a strong AI component

Machine learning and AI feature in the top 5 thematic areas addressed by MSCA project under Horizon Europe, surpassed only by Materials Engineering.

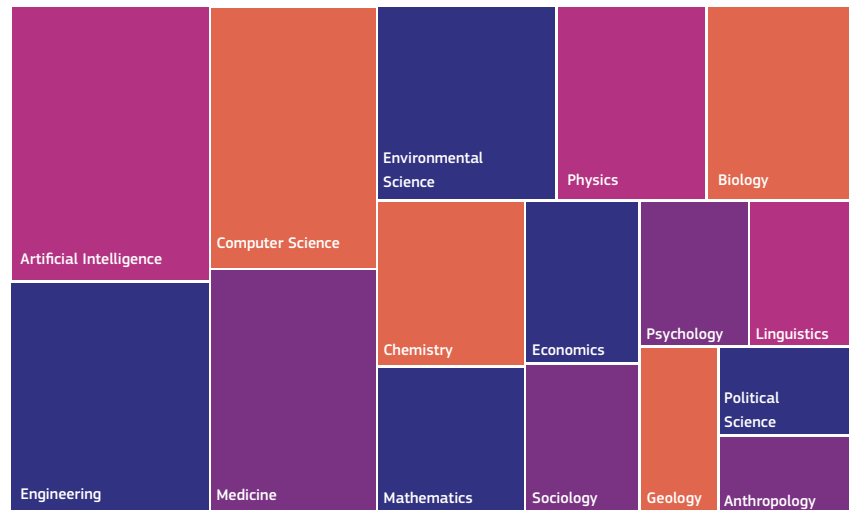
Top 5 research areas in MSCA under Horizon Europe

1 Materials engineering	3 Numerical analysis, simulation, optimisation, modelling tools
2 Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)	4 Molecular biology and interactions
	5 Energy collection, conversion and storage, renewable energy

Source: Horizon Europe MSCA Dashboard

AI uptake in MSCA doctoral programmes by scientific fields

The MSCA funds projects across numerous fields of research, encouraging interdisciplinary work and demonstrating how AI intersects not only with technical domains but also with ethics, law, social sciences, medicine, and environmental sciences. These projects train fellows in new AI tools and methods, support them in developing their own and allow them to apply them through intersectoral collaborations.



Source: Project keywords on CORDIS
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Success Stories

Of the 1138 MSCA projects identified as having a strong AI component, 376 have already been featured as success stories in the CORDIS Results Packs and Horizon Results Platform. Just to highlight a few:

Soft, Self-responsive, Smart Materials for Robots (SMART)

The SMART project is an MSCA Doctoral Network that has trained doctoral candidates in developing AI-driven algorithms and machine learning models to enhance smart materials for robotics. It focused on improving material longevity, performance, and functionality. The doctoral candidates gained expertise in material science, robotics, and AI, applying their skills in collaboration with universities and industry partners.

Organization Specific Threat Intelligence Mining and sharing (OPTIMA)

The OPTIMA is an MSCA Postdoctoral Fellowship that used machine learning and explainable AI to develop methods for classifying network behaviour and identifying cyberthreats, aiding governments and businesses in data security. The SPRITZ Security and Privacy Group continues to leverage OPTIMA's collaborative achievements.

Artificial Intelligence for the Deaf (aiD)

The aiD is an MSCA Staff Exchange project which allowed doctoral candidates and more experienced researchers to upgrade their skills and leverage AI to bridge communication gaps between deaf and hearing individuals, creating memory-efficient sign language transcription services and translators. By harnessing generative AI, the project promotes inclusivity and offers potential business opportunities.

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