ACHILLES

HUMAN-CENTRED MACHINE LEARNING:
LIGHTER, CLEARER, SAFER

Aiming to Build Trustworthy, Transparent, and Sustainable Artificial Intelligence

ACHILLES Project Tackles AI's Greatest Vulnerabilities with Over €8 Million in EU Funding

A European consortium of 16 leading organizations has launched ACHILLES, a groundbreaking project dedicated to reshaping the future of Artificial Intelligence (AI) by making it Lighter, Clearer, and Safer. Funded with over €8 million under the Horizon Europe Framework Programme, ACHILLES aims to address AI's "Achilles' heel" – efficiency and trust.

About ACHILLES

Drawing inspiration from the legendary warrior Achilles, the project aims to conquer AI's weaknesses with a modern approach. As AI becomes more integrated into everyday life, concerns about transparency, ethical use, and energy consumption grow. ACHILLES tackles these challenges by introducing innovative approaches and supporting the development of AI systems that are 'Lighter' (more sustainable and efficient), 'Clearer' (transparent and easy to understand), and 'Safer' (robust and compliant with ethical and legal standards). By giving AI a twist on the Olympic motto, ACHILLES strives not just for 'Faster, Higher, Stronger,' but for an AI that is more sustainable, transparent, and more attuned to human values.

"At the heart of ACHILLES, is an iterative development cycle inspired by the good aspects of clinical trials" stated André Carreiro, Senior Scientist and ACHILLES Project Coordinator. "This cycle" explains Dr. Carreiro, "comprises four core modules: human-centric methodologies, data-centric operations, model-centric strategies, and deployment-centric optimizations. The cycle concludes with a return to human-centered approaches, ensuring that explainability and transparency are built into the system". The ACHILLES coordinator also emphasised the strategic impact of the project within both technical-scientific and policy-related developments: "with the ACHILLES project we aim to foster AI advancements which align with EU ethical standards, legal requirements, and a commitment to transparency." In fact, the multidisciplinary ACHILLES team is poised to make a meaningful impact on AI development in Europe, balancing innovation with responsibility.

A significant innovation within the project is the ACHILLES Integrated Development Environment (IDE), an ML-driven platform - a kind of toolkit - designed to fundamentally transform how AI solutions are conceived and implemented. The ACHILLES IDE bridges the gap between decision-makers, developers, and end-users, aligning all stakeholders in the AI lifecycle.

ACHILLES' Goal

The goal is to create systems that are not only more effective and efficient but also ethically responsible, transparent, and fully compliant with regulatory standards. ACHILLES will validate its approaches through real-world applications in diverse sectors, including healthcare, identity verification, content creation, and pharmaceuticals. These case studies will illustrate the practical impact of ACHILLES for broad adoption across industries, demonstrating its capacity to support Europe's leadership in Responsible AI.

Project Partners

The ACHILLES consortium brings together a diverse group of research institutions, universities, healthcare organizations, and technology providers from across Europe. This multidisciplinary team combines AI research, ethics, healthcare, data privacy, human-centered design, and identity verification to address the complex challenges facing AI development today. By drawing from such a broad range of expertise, ACHILLES is devoted to providing tools and frameworks that align AI development with public good, regulatory standards, and a commitment to transparency – ultimately fostering greater trust in powerful AI technologies.

Consortium

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Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101189689.