



OPPORTUNITY

34

SCOPE **WITHIN REACH**

UNCERTAINTIES

Collaboration, Technology

MEGATRENDS

Future Humanity

TRENDS

- Artificial Intelligence
- Cross-sectoral partnership
- Future of purpose & work
- Human-Human
- Human-Machine

SECTORS IMPACTED

- Agriculture & Food
- Automotive, Aerospace & Aviation
- Cyber & Information Security
- Data Science, AI & Machine Learning
- Education
- Government Services
- Health & Healthcare
- Materials & Biotechnology

What if the future of advanced machine intelligence is interdisciplinary?

NO A'I' IN TEAM

An integrated, interdisciplinary, collaborative approach to AI education, research, development, and deployment leads to increased successful deployment of AI and associated public trust and tangible benefits.





WHY IT MATTERS TODAY

The World Economic Forum's Future of Jobs Report 2023 indicates that 75% of companies plan to adopt AI, leading to significant workforce changes.⁷⁰⁸ By 2025, AI investment may reach \$100 billion in the United States alone and \$200 billion globally, with significant impacts on the global economy expected to start somewhere between 2025 and 2030.⁷⁰⁹

The success of AI depends on the underlying models, data, and training parameters. Despite advances, AI implementation failure rates are high, with up to 87% of projects never launched⁷¹⁰ and up to 80% facing challenges in data acquisition.⁷¹¹ When deployed in healthcare, for example, a growing number of AI programmes are not being translated into better health outcomes, whether in terms of public health policy effectiveness, response to emergencies, or combating non-communicable diseases.⁷¹² Many exhibit poor methodology and high risk of bias, hindering reproducibility and real-world clinical applications beyond the laboratory and testing results,⁷¹³ as seen in IBM's Watson Health and Google's DeepMind.⁷¹⁴ In addition, while AI is transforming healthcare and other areas, it faces challenges in sustainably integrating into society, whether because of challenges in interdisciplinary collaboration, transparency in decision-making or AI education and regulation.⁷¹⁵

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An interdisciplinary approach to AI development and deployment, considering ethical, environmental, and social impacts, from the requirements stage through to implementation, can produce beneficial outcomes,⁷¹⁶ positioning AI as a source of opportunities and fostering public trust in AI. Teams of experts or cross-disciplinary, global consortiums can enhance AI's adoption and demonstrate tangible benefits.⁷¹⁷ Broadening AI in higher education and research across all disciplines – beyond computer science and engineering – causes AI to become an interdisciplinary field that bridges the human-machine gap.⁷¹⁸

BENEFITS

An interdisciplinary approach to AI means that the deployment of AI is improved and more likely to occur. With enhanced innovation, AI solutions will perform better, taking ethical and societal considerations into account. Advances in education and research support growth in the field and enhance public trust in AI.

RISKS

Interdisciplinary approaches to AI development and deployment may include excessive costs and slower turnaround times, resulting in the same quality outcomes and the deterrence of further investments, or resulting in a reaction to do things faster to recover costs.

