

Al for Health: Evaluation of Applications and Datasets

2nd Workshop on Law, Society and Artificial Intelligence: Interdisciplinary Perspectives on Al Safety

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AI in Health



Biomedicine and Healthcare are high-stakes fields

Systems cannot rely barely on just accuracy or efficiency \rightarrow Now we are facing the need to address **trust**, **fairness**, **accountability and human-AI collaborations**.

Al Potential:

- Drug discovery;
- Medical imaging diagnostics;
- Clinical Decision Support Systems;
- Among others

Al Challenges:

- Ethical governance;
- Safety;
- Fairness...

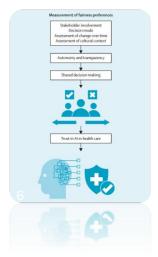




















AHEAD at a glimpse



Lack of consensus on standardised approaches for responsible implementation



Comprehensive evaluation of AI from various perspectives, for the responsible development and deployment of high-risk systems and models, such as those used in healthcare.



Based on a global, transdisciplinary, international community to establish a Methodology and implement ethical, legal, human, societal, and technical standards for evaluating AI systems in healthcare and biomedicine.



Ensure quality healthcare for all through responsible AI development.







Partners











AHEAD: Expertise Partners

The consortium assembles experts across various domains, all of them working on issues related to AI and health, including

Al Technology nostrum ONTTDATA Software Development CENTRE FOR RESEARCH & TECHNOLOGY HELLAS barcelona Beta Health UNIVERSITÀ DI TRENTO Law Sociology

Psychology



Bioethics and Embedded Ethics







Biomedicine





Gender, Diversity and Inclusion





Data Management and Al

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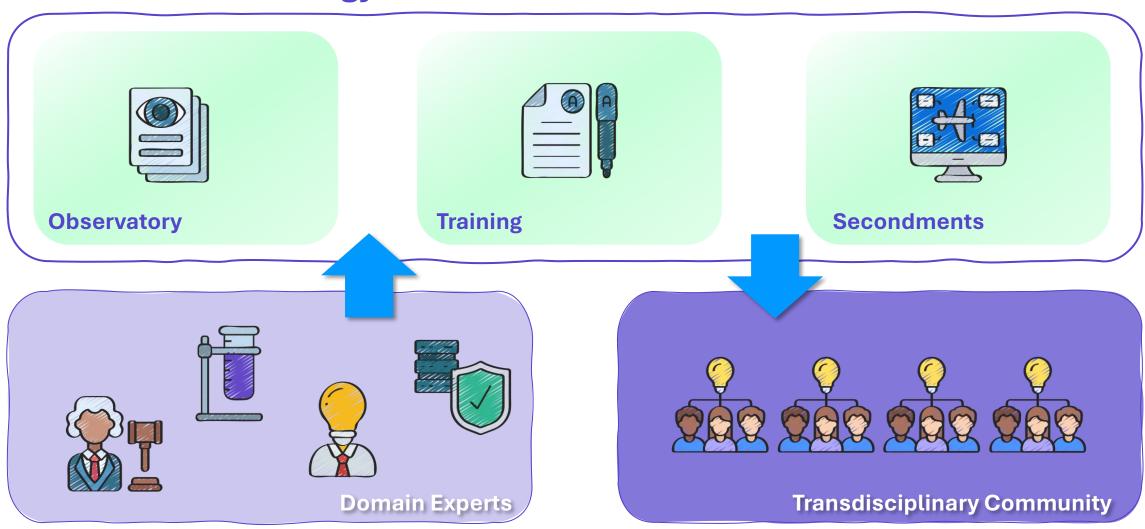








AHEAD's methodology



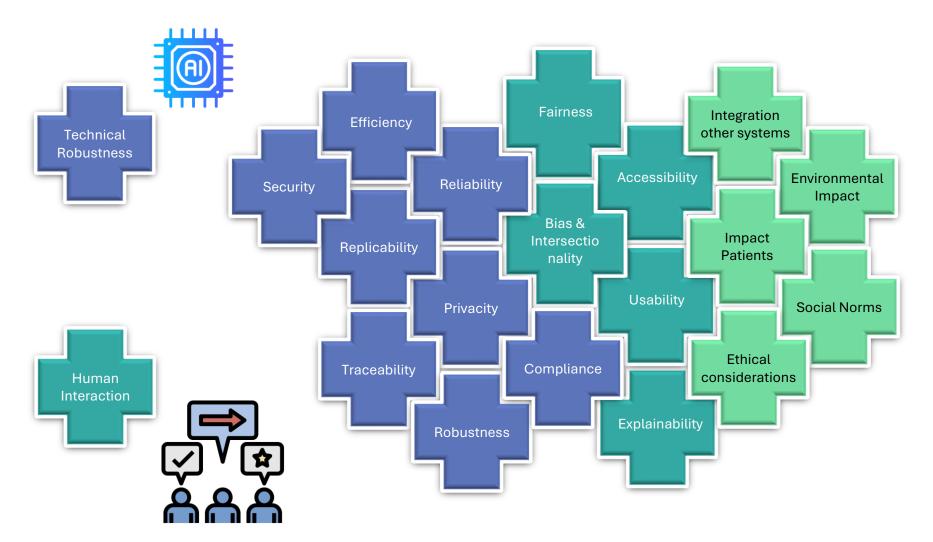








Indicators for AI in Healthcare & Biomedicine









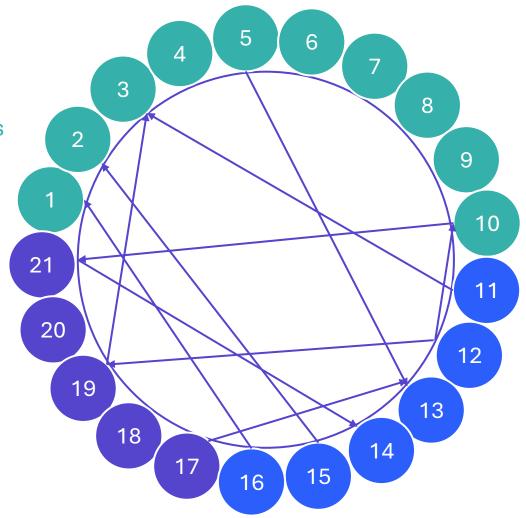




Indicators for AI in Healthcare & Biomedicine

Technical Indicators

- 1. Efficiency & Effectiveness
- 2. Tech. Resources
- 3. Accessibility
- 4. Reliability
- 5. Data Security & Privacity
- 6. Compliance
- 7. Replicability
- 8. Traceability
- 9. Robustness
- 10. Explainability



Societal Indicators

- 11. Integration with Healthcare Systems
- 12. Impact on Patients & Providers
- 13. Ethical Considerations
- 14. Social Norms & Values
- 15. Economic Viability
- 16. Environmental Impact

Human Interaction Indicators

- 17. Fairness & Equity
- 18. Bias & Intersectionality
- 19. Usability
- 20. Accessibility
- 21. Transparency

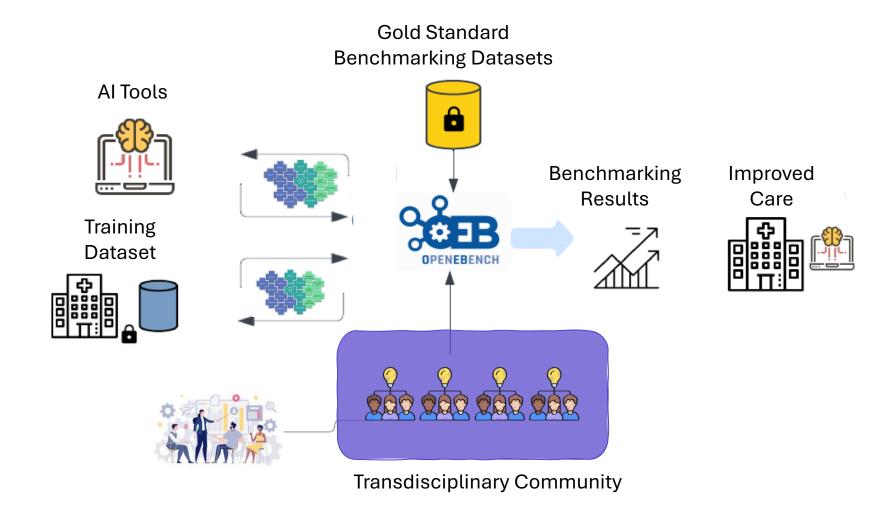








Extension of OpenEBench: Benchmarking of AI Applications









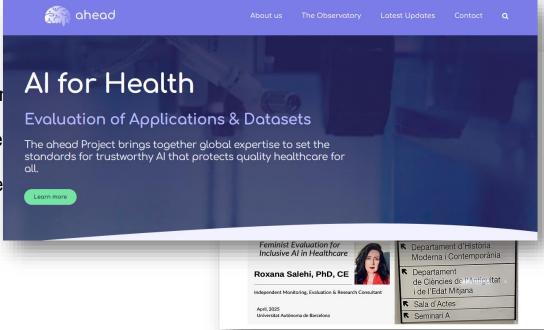


Current accomplishments

- First Secondment completed (Law to technical: University of Trento to Barcelona Supercomputing Center)
- First Researchers from BSC abroad (currently in CERTH, Greece)

 Training scheduled to run in Barcelona from June 27th until July 25th, 2025. Nostrum Biodiscovery hosting 7 researchers from all the partners.

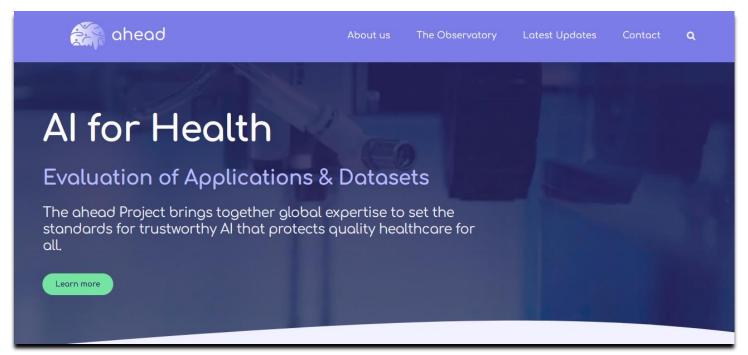
- Our main web page is up and running: ahead-msca.eu
- First approximations about how to measure ethical and legal implication
 - Al Act, GDPR, Ethical considerations at European and National Le
 - Active networking alongside Barcelona, Spain and Europe in Gene
- And more to come...











https://ahead-msca.eu/

Thank you for your attention!

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References

- Fleming, N. (2018). How artificial intelligence is changing drug discovery. Nature, 557(7707), S55–S57.
 https://doi.org/10.1038/d41586-018-05267-x
- 2. National Institutes of Health. (2024, July 23). *NIH findings shed light on risks and benefits of integrating AI into medical decision-making*. https://www.nih.gov/news-events/news-releases/nih-findings-shed-light-risks-benefits-integrating-ai-into-medical-decision-making
- 3. Healthcare Transformers. (2025, January 15). *Artificial intelligence in clinical decision support*. https://healthcaretransformers.com/digital-health/artificial-intelligence/artificial-intelligence-clinical-decision-support/healthcaretransformers.com+4
- 4. UNESCO. (2021). Recommendation on the ethics of artificial intelligence. https://unesdoc.unesco.org/ark:/48223/pf0000385082
- 5. Layne, R. (2024, June 4). *Al in the health insurance industry: An explainer and research roundup*. The Journalist's Resource. https://journalistsresource.org/home/ai-in-the-health-insurance-industry-explainer-and-research-roundup/
- 6. Mittelstadt, B. D., & Floridi, L. (2024). Measuring fairness preferences is important for artificial intelligence in health care. *The Lancet Digital Health*, 6(4), e200–e201. https://doi.org/10.1016/S2589-7500(24)00059-1





