Health Data and AI: Responsible Innovations, Ethics and Regulatory Strategies

29 - 31 January 2024

Overview
This three-day advanced course offers a critical overview and understanding of the ethical and regulatory challenges triggered by the use of big data and artificial intelligence (AI) in the health sector. Digital health technologies and AI have developed rapidly in recent years, further accelerated by the Covid 19 pandemic. The emergence of large language models and AI chatbots such as ChatGPT not only exacerbated this trend in the health domain but also accentuated the ethical issues related to such technologies and the lack oversight. The increasing potential for these technologies to have a significant impact on individuals and societies requires continuous engagement with the ethical and governance challenges they pose.

Through a combination of lectures, case studies and breakout sessions, the course will examine some of the fundamental disruptions brought about by the use of AI and big data in health care. It will examine key multi-dimensional ethical and legal questions covering issues such as privacy, bias, transparency and explainability, equity and non-discrimination. It will review current regulatory trends and governance responses as well as emerging practical guidance, approaches and mechanisms aimed at supporting researchers and policy makers.

During the course, participants will have the opportunity to learn from and interact with thought leaders, practitioners, and scholars and benefit from the international and dynamic academic environment of the ETH, and the exceptional density of public and private actors engaged in the field.

Target group
The course is aimed at an international, multidisciplinary, and cross-sector audience. It is open to doctoral students and mid-level professionals active in academic research, the private sector and policymaking from various disciplines including computer science, political science, philosophy, population health, medicine, biomedical sciences, law, and engineering.

We encourage applications from AI developers, as well as researchers employed in the pharmaceutical, health insurance, and digital health industries, with a desire to expand their understanding of data ethics and AI's impact on society.

Learning Goals
The course will provide participants with the latest insights in ethics and governance and equip them with the necessary competences, skills, tools, and critical understanding, enabling them to effectively address ethics and governance issues through their respective roles. By attending the "Health DARES" course, participants will be able to:

- Understand the health data ecosystems, the data lifecycle and value chain, and the stakeholders involved.
- Identify and critically examine key ethical challenges related to the use of health data and AI through real-life examples and case studies.
- Evaluate current strategies and approaches to address some of the main ethical challenges, their strengths as well as limitations.
- Analyse regulatory trends and the frameworks governing data uses, AI and the health applications resulting from them.

Structure and dates
The programme comprises a three-day on-site course from January 29-31, 2024, on the campus of the ETH Zurich. It encompasses four sessions, which are clustered around the corresponding interdisciplinary learning blocks.

Lecturers
The lecturers include distinguished scholars, policymakers, from ETH and guest lecturers from internationally renowned leading institutions and organizations.

Language of instruction
English

Organisers
The academic director of the program is Prof. Dr. Effy Vayena (ETH Zurich). The concept was developed in collaboration with Dr. Elettra Ronchi, PhD, MPP (WHO policy consultant; former Head of the OECD Data Governance and Privacy Unit). The course is organised by the Health Ethics & Policy Lab at ETH Zürich in collaboration with the ETH AI Centre.