TITLE : Governing Big Data. Ethical issues in Digital surveillance for public health

Employer : CIRAD

Hosting Research unit
CIRAD, ASTRE
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Principal Supervisor
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Abstract (max 300 words):
The digital disease detection or digital surveillance merges at the intersection of personal information, public health and information technologies and challenges the traditional epidemiology. Nowadays Intelligence Services use multiple sources and data grounded into non traditional area (ex twitter post on arrange of topics included health related informations) (Aiello, Renson, et Zivich 2020). The H2020 MOOD project aims at harness the data mining and analytical techniques to the Big data originating from multiple sources to improve detection, monitoring, and assessment of emerging diseases in Europe.
Little is known about digital health surveillance on the potential impact on personal protection and health equity. A well-known tension exist between public health and individual liberty. With COVID-19 pandemic, issues of data privacy, digital surveillance remain highly controversial because of a lack of public trust in political institution and sciences. These activities raise significantly question on protection of Individual liberty, right and privacy and issues related to oversight (Mikal, 2016). In EU'2016 General Protection Data regulation it states that particular attention should be given to what called "sensitive data" include: profiling, automated decision making, data mining techniques, Big data analytics and artificial intelligence.

This study will evaluate the ethical issues faced by the MOOD consortium particularly researchers and members of the ethic board in their everyday use of surveillance data, alghorithm and Artificial Intelligence.
We will showcase MOOD scientists practices when collecting, analyzing, visualizing infectious disease and health data. We will try to analyse the social and ethical life of alghoritms and IA in the MOOD framework.

Keywords :

Artificial intelligence (AI), Algorithm, Machine learning, Ethics, Digital data, Health, Social media, Surveillance, Diseases

Objectives of the internship:

1. Mapping MOOD Big Data Network
2. Conduct a literature review on Ethics in AI in a particular field of health and disease surveillance
3. Conduct a survey on Discrimination Impact Assessment
4. Help to Propose some avenues to lay the foundations of a contextualized ethical framework for the use of Big Data in the intelligence surveillance
5. Help to Establish a Code of Conduct
6. Contribute to the writing of a scientific paper

Expected profile of the candidate:

The intern is expected to have

- A Master Degree and background in social sciences and humanities (anthropology, political science, science and technology studies, geography, law),
- Competences on qualitative methods (in depth interview, ethnography…)
- Competences on quantitative methods (surveys, mapping and statistics) will be high valuable.

We are expecting from the candidate an adequacy between the profile of the candidate with the research project.

Language of work: English

Additional Information:

The MOOD project aims to develop innovative tools and services for the early detection, assessment, and monitoring of current and future infectious disease threats across Europe in the context of continuous global, environmental, and climatic change.

MOOD innovations will increase the operational abilities of epidemic intelligence systems to face new disease threats, including emerging diseases of known or unknown origins, and antimicrobial resistance pathogens. Through big data and disease modelling innovations, the MOOD project will address the challenges of cross-sectoral data sharing and valorisation in a One Health framework based on multi-disciplinary collaboration for animal, human, and environmental health. Human and veterinary public-health agencies responsible for designing and implementing strategies to mitigate the identified risks are the end-users.

A major objective of MOOD is to ensure sustainability beyond the project duration. Therefore, a governance model and business case for a not-for-profit organisation using a range of business framework tools will be completed by the

project's end. A framework called *Business Model Canvas* will be implemented to avoid time-consuming and opaque aspects of a classical business model.

The MOOD management team ensures compliance with the highest ethical standards as presented in the European Charter for Researchers throughout all project outputs.

Grant:
6 months started to 3rd January 2022
Remuneration, including salary and research support.
The intern will benefit from a research stay at CIRAD, UMR ASTRE
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