

## Laidlaw Scholarship Program 2020-21

### UCL Research Proposal

Yung-Hsuan Wu, The University of Hong Kong

**Title:** Regulating Artificial Intelligence in Europe: Challenges and Opportunities

#### Research Questions

This project attempts to review EU's and other leading European countries' coping mechanisms against the challenges of Artificial Intelligence through three aspects:

1. The fields in need of AI regulations will be identified. How are the ethics and liability of data collection, social inequality, and incentives for research and development covered under the current European policy regime?
2. The efficacy of the proposed policies will be evaluated. Are they flexible and responsive enough to bridge gaps despite the rapid advancement of AI?
3. The global impact of European regulations should be discussed. As the US and China pioneer in AI development, how could Europe establish itself as the norm entrepreneur and steer global dialogues?

(Questions are made broad on purpose since the final research scope will be discussed and finalized with the UCL supervisor.)

#### Research background:

In our near future, Artificial Intelligence is just the beginning. AI involves a huge branch of technology that allows machines to “learn” or mimic the cognitive functions that human minds display. This method of “machine learning” substantially lowers the cost of pattern predictions as it makes processing a tremendous amount of data possible, economical, and available at a scale that surpasses human capabilities. Such an advancement would aid humans in solving conundrums in healthcare, energy usage, food supply, transportation, logistics, and virtually every aspect of human lives. While the impacts are far-reaching, the threats AI raise have proved to be concerning as well. The collection of input data needs to be regulated in case of security breach and biased usage of information. The enhanced ability of AI drives lower-skilled or labor-centric workers out of job, enlarging social equity gap. The automation of weapons signals alarming rates of proliferation and arms race.

Therefore, in the race of AI, actors must not only promote its growth but mitigate its dangers to survive. Governments and the society must come to an agreement on the best way to employ this cutting-edge technology. The research project will focus on the published materials, policy papers, or regulations of the European Union, UK government, and other key politicians in Europe and critically assess whether and how decision-makers are regulating the development of AI effectively.

## **Methodology:**

- Conduct academic and policy literature reviews based on published materials from European countries and the EU
- Conduct research interviews with politicians, policymakers and business representatives across European countries and the EU

## **Project scope and levels of analysis:**

Due to limited time and labor, the research scope will be defined and narrowed down. As the study mainly overviews the European continent as a whole, the major focus lopsidedly falls on the largest supranational organization European Union and its regulations in the relevant field, with special attention tended to countries prominent in the investment of this new technology.

In terms of the levels of analysis, the project will discuss each level to the following extent:

- The 3<sup>rd</sup> level: Supranational systems

Most analyses and research will concentrate on the EU regulations and policies to understand the so-called “European approach to Artificial Intelligence, especially the published materials from The European AI Alliance, High-Level Expert Group on Artificial Intelligence, etc.

The scholar takes special interests in relevant social and ethical issues, and thus will delve deeper into EU’s regulatory role in forging member states against social challenges. Neglected areas of interests lacking research will be identified during the policy review process. Meanwhile, the project will investigate whether and how EU, switching to a more assisting role, could successfully facilitate national governments, private sectors, and others in taking charge of AI research and development.

- The 2<sup>nd</sup> level: National governments

A smaller part of the research will focus on the three strongest AI regions, the UK, Germany, and France, as outlined by the European Commission. The scholar will pore through their respective policy regimes on AI to identify their strengths, differences in their approaches, and their role as AI leaders.

Whether and how EU regulations positively affect these countries will be an urging question to answer as well. The interaction between the 3<sup>rd</sup> and 2<sup>nd</sup> levels serves as an observation point as to the effectiveness of international systems.

- The 1<sup>st</sup> level: Individuals

Lastly, minor attention will be given to the private companies that perform exceptionally or active AI investors in Europe. Ideally, this level will give more insights about the implementation or execution of policies. It will be beneficial to the understanding of the forefront of AI application and whether the policy flexibility and responsiveness suffice.

This will mainly rely on semi-structured or open-structured interviews with private sector leaders and policymakers to gain information from their personal outlooks. While interview opportunities are not that common, the scholar wishes to hear from Graphcore (UK), Amadeus

Capital Partners (UK), BpiFrance (FR), the European Commission, and more.

**Expected output:**

- The final writing to be included in the UCL European Institute reports
- Online blogs on the topic to be published across UCL channels
- Podcast programs
- A separate report prepared by the scholar to specify individual contribution, if required

**Location:** Moved online due to Covid-19

The geographic location of the project has been moved online due to the Covid-19 situation; however, the focus of the project will be Europe-wide. That is, materials used may come from various European countries, whichever have predominant interest in the fields. Moreover, as the research involves interviews from high-level stakeholders across Europe, online meeting with key figures will be necessary and encouraged by the supervisor.