*Mozilla fellowship App*

*THINGS:*

*Mission Driven, Impact, collaboration, leverage, initiative, communication*

***What is the project you plan to use your fellowship to pursue?  
Please include: the issue(s) your project will address; the intended outcome(s) of your proposed project; who you will need to work with to achieve the intended impact of your project; and how you will engage others in your work. (2100 char)*** *(NB: problem statement, how proj addresses that, contribs to broader change. Also how your proj impact could be communicated and socialized.*

Compliance, following laws and guidelines, is the standard answer to research ethics at universities but a myopic compliance focus has conditioned scientists to view ethics and transparency as a constraint rather than a satisfying part of their work. Young scientists receive mandatory ethics training that encourages this view and leaves them without a place to discuss and develop the sort of thinking required to grapple with the real and hypothetical impacts of their work. As we begin to incorporate AI and non-traditional data sources and encounter new tools, there is no intellectual space in which scientists can explore whether their methods and intent are good. The movement to ‘decolonize science’ is a great example of an important conversation that finds no clear home in the typical framework of the science department.

With compliance-focused and budget-constrained universities, there is a great opportunity to make ethics and transparency an open project in its own right. I intend to develop an open ethics platform for new scientists broadly, but with a specific eye to AI, which could eventually supplant the unsatisfying compliance training common now. With local resources such as a new AI Institute, the Alan Alda Center for Communicating Science, and the STRIDE decision-support training program on campus, there is ready collaboration available. I intend to draw on the Next Generation Explorers Network to understand the process of ethics at other institutions and encourage collaboration.

The public views AI as a worrying and nebulous black box. An adaptable and open approach to teaching science ethics can solve two problems: we will have space to consider the effects and process of our work from the beginning, including privacy and social concerns in AI, and we can reinvigorate the idea of the public intellectual so we are equipped to make our work interpretable. With the concurrent rise of science skepticism and AI, we need scientists good at careful thought and at dismantling the black box. Everyone benefits if that process occurs in the open.

***What impact do you see your proposed fellowship project having beyond the term of your fellowship?***

***Please include: the ultimate change in society that the project will help drive, and how the project relates to your personal vision and mission.* (2100 char)**

Machine learning is creating a new generation of scientists and they are bursting out of the ivory tower into industry data science and other non-academic fields. But they are educated as if they will remain in academia, with the skills to submit paperwork to a compliance review board but discouraged from working through broader and complicated ethical questions in their field. I encountered this myself as I developed a project to augment my fieldwork in Antarctica by scraping polar vacation photos from the web, assembling a dataset of animal sightings. While I initially questioned my plan on copyright grounds, I began to wonder if this, a fairly innocuous use of a web-crawler and an AI image classifier, was still problematic given that the owners did not intend their photos to be used in that way. While it’s easy to dismiss such a concern as so minor to be above notice, I worry now that this is the process of AI deployments – a sort of ‘death by 1000 cuts’ to privacy. While we focus only on the largest players – vast tech companies – we ignore how the minor players are creating a culture in which minor misuses are normalized.

Ethics is not merely complying with laws and rules but is the process of thought. It requires that we ask what is good and right for all of us. AI is terrifying for many because those in the field make little effort to make it interpretable. This is self-reinforcing: as public oversight is limited by AI’s opacity, it becomes easier for developers and scientists to avoid thinking about negative effects, and the need to keep it opaque grows. If young practitioners develop the intellectual skills to work through their questions and learn to find the process satisfying, they will want their work to be open, interpretable. They will want the public to understand the ways in which their uses of data and the insights they derive from AI are well-considered and should welcome public scrutiny. And more importantly, as public intellectuals they will be able to act as a check on the rest of the post-privacy economy.

***Describe what open science means to you, and how it advances your research.* (800)**

Open science benefits the open scientist, their peers, and the public. In the first, creating open science requires that a researcher slow down and make sure that their work is both of high quality and interpretable, which defeats any compulsion to cut corners or ignore an inconvenient result. It gives new scientists a window into the process of science which encourages confidence and it gives everyone tools and ideas to avoid building up from first principles. For the public

***What project in the field do you find most inspiring to further open science and the open web? (800)***

***Mozilla has identified a strategic focus on “better machine decision making” and is looking for impactful projects that will help to ensure this technology is developed and deployed with ethics, responsibility, and accountability in mind. Does your project relate to Mozilla’s priority focus on better machine decision making?***

Yes

***How would your project/work benefit from feedback and input from Mozilla’s interdisciplinary community, including collaborating with other fellows?***

***At Mozilla, we are committed to an internet that catalyzes collaboration among diverse communities working together for the common good. In your response, please also include the skills/experience you will share with others. (800)***

I’m new in AI and would value talking to others who work on AI and questions of ethics in that area. I’d also benefit a lot from being able to talk through and get advice about platform creation. These are skills I’m beginning to develop but in no way could I build out a collaborative platform by myself.

I can share my background in human ecology – interactions of people with built and natural systems

***What research field(s) are you in? (500)***

Spatial, community, and population ecology; satellite remote sensing; polar biology

***What is your research focus? (500)***

I use machine learning and computer vision to try to find novel ways of getting data for ecological questions. I use those data and field data to understand the movements and populations of Antarctic whales, seals, and penguins which are

***What is a project you are proud of working on? Please provide the project URL (URL)***

***How did you contribute to that project and why are you proud of it? (800)***

***I am comfortable working in the open and sharing my work publicly, whether through speaking or writing opportunities.***

Yes

***URL to a video of a talk/presentation you have given:***

***URL to a blog/article/opinion piece you have written:***

***If you are not able to share a link to a video, please provide the name and date (month, year) of any professional conferences/events where you have previously spoken.***

***Name, etc. of one professional reference***

***CV***

***Letter of Rec***

***Project timeline***