



ETHICAL AND FEMINIST ARTIFICIAL INTELLIGENCE (AI): AN INTRODUCTION TO MACHINE LEARNING FOR SOCIAL IMPACT

\$1,175.00 (tiered pricing and scholarships available!)

**6 SESSIONS OF 3 HOURS EACH ON MON, WED, FRIDAYS:
FEB 5, 7, 9, 12, 14, & 16**

9:00am-12:15pm EST (US and Canada)

2:00pm-5:15pm GMT (Europe)

5:00pm-8:15pm EAT (East Africa)

7:30pm-10:45pm IST (India)

Grow your algorithmic literacy! If you are a non-technical practitioner, *you are absolutely needed* at the AI table! Learn the basics, gain skills, and build confidence to engage in social impact projects with machine learning components. If you work in gender & social inclusion support, proposal development, program design, backstopping, and other **non**-technical areas, this training is for you. This training assumes no prior understanding of algorithms and will use conceptual understandings, rather than statistical or data science approaches, to upskill you in this rapidly evolving technology. In this 6-day interactive online course, we will learn how machine learning algorithms operate, explore challenges around bias, ethics, and inclusion, and review development use cases. We will finish with best practices and examples of harnessing the power of machine learning for gender equity and social inclusion. This course will empower you to understand, advocate for, and address ethical AI concerns broadly and gender equality, social inclusion, diversity, and equity concerns specifically. You will emerge with a greater ability to read and apply USAID guidance and constructively collaborate with coders/developers for successful machine learning for social impact projects.

Notes to participants:

- (1) no statistics required! We will work from conceptual and layperson understandings, (2) we will use examples from data-rich U.S. to understand ethical concerns before applying these to international development and social sector cases, and
- (3) be sure to plan in prep time ~2 hours per session.

Session 1: Intro to AI, inequalities, and machine learning models

1. Welcomer and training overview.
2. Definitions, terms, and learning models.
3. Apply terms with train your own algorithm activity.

A rapid introduction to the core understanding the fight for social justice and equality in the evolving context of artificial intelligence and automation. A conceptual introduction to machine learning models (supervised, unsupervised, reinforcement, and neural nets) and terms such as structured/unstructured data, data labeling, and optimization. We will finish the day with an activity and discussion where we train our own (supervised learning) algorithm to both apply the terms and critically interrogate the results.

Session 2: Understanding data bias through neural nets

1. Understanding the digital divide through two data bias cases.
2. How do neural nets work?
3. Looking under the hood of neural nets into data bias and potential solutions.

Data is not the only source of bias, but it's definitely an important one! Using case studies, review how data inequality embeds into algorithmic performance. Debate the potentials and pitfalls of "we just need more data" as the most logical solution. Dive into the opaque world of neural net weights and biases. Play Pictionary with a neural net to understand data bias. Learn about efforts to enhance datasets and examples of datasets gone wrong.

Session 3: Righting wrongs? The need for content moderation and fairness and bias metrics

1. ChatGPT bias and content moderation efforts in large language models
2. What is algorithmic auditing?
3. Fairness/bias metrics and confusion matrix

Move newfound neural nets knowledge to practice by considering ChatGPT and its training data in the context of existing social norms. Learn about how content moderation and the work that precedes it. Dive into the world of algorithmic auditing by asking: What do we mean when we say fair? An overview of dominant fairness metrics, the confusion matrix, and its role in assessing accuracy. Move this into practice with a demo of IBM AI Toolkit and a peek at other fairness-testing solutions.

Session 4: AI Regulation and the task of localizing Global AI Ethics

1. Overview of global regulation efforts, including EU AI Act and the White House Bill of AI Rights.
2. Global South regulatory movements.
3. Functional use case discussion: predictive policing or predictive peacekeeping?

Broad overview of regulatory efforts in the Global North and efforts of OECD in ethical AI. Rapid review of Global South interests, regulations, and state of AI. If time allows: discuss the importance of functional use in determining ethical AI use.

Session 5: Moving to practice

1. Review USAID suite of machine learning guidance. Discuss included activities.
2. Nudge theory and high dimensional space.
3. Nudging in practice: ICTworks blog vs. DAWN case studies.

Review of the software development lifecycle and the importance of cross-functional teams that include *you*. Highlights from USAID's suite of machine-learning related reports and guidance materials (2016-2021). Review Nobel Prize winning theory of nudging and consider how the development sector might be tempted to use it.

Session 6: Toward Ethical AI in practice

1. Participant cases & discussion.
2. Presentation of feminist supercomputing as a solution (Data 2x cases).
3. General Q&A/debrief and next steps.

Come with an example of a ML/AI application in your area of interest for the group to discuss and debate. I will present an alternative use of machine learning to address inequalities. Opportunity to catch up on material if discussions have been rich throughout the training. Time to answer questions, reflect, and decide if, what, and how we want to keep the momentum going!

*Syllabus open to change due to trainer and/or participant interests

About the Trainer

Dr. Emily Springer is one of 100 Brilliant Women in AI Ethics™ in 2024 and serves as the emerging technologies consultant within the Gender and Human Rights technical division at UNFPA, specializing in ethical and feminist AI, and as the AI consultant with the Global Center for Gender Equality, providing technical gender assistance to Bill and Melinda Gates Foundation. Previously, Dr. Springer worked with Athena Infonomics as part of DAI's Digital Frontiers on a digital inclusion toolkit, World Bank's IFC as a strategy consultant for digitalization of African higher education institutions, and worked at a Microsoft partner building relational database and automation solutions for enterprise clients. She is trained as an interdisciplinary sociologist and completed a postdoc at Arizona State University in the US where she taught undergraduates about how machine learning changes not only our everyday interactions but also global geopolitical landscapes, and has taught and mentored graduate students in Development Practice and Social Justice programs. She has served as a consultant to numerous development organizations including World Bank Africa Gender Innovation Lab, DAI, CARE, and others. She often works for USAID DC to improve global practices around gender integration and inclusive tech. She is excited to help build a network of critical practitioners to ensure machine learning works for women in all their intersectional experiences.

Sign up now through [Cynara's Gender Training Platform!](#)

Tiered pricing to adjust for funding inequities and scholarships are available.