Alexander Martin Mussgnug

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Areas of Specialization: philosophy of AI, philosophy of science

Areas of Competence: applied ethics, machine learning, technology and science policy, economics

EDUCATION

2021 - 2025 **University of Edinburgh, PhD Student in Philosophy**
Dissertation: "How machine learning measures and what we can learn from it"
Supervisors: Shannon Vallor, Atoosa Kasirzadeh, and Sabina Leonelli

2019 - 2021 **Duke University, MA Tech Ethics, Bioethics, and Science Policy**
Dissertation: "What counts? Data and the Philosophy of Measurement"
Examiners: Kevin Hoover, Michael B. Waitzkin, Matt Perault

2018 **University of Konstanz, B.Sc. Economics**

2017 **University of North Carolina at Chapel Hill, Exchange Studies**

PEER-REVIEWED PUBLICATIONS PRESENTATIONS

Publications:

Mussgnug, A. M. (2022). The predictive reframing of machine learning applications: Good predictions and bad measurements. *European Journal for Philosophy of Science*, *12*(3), 55**.** **https://doi.org/10.1007/s13194-022-00484-8**

Presentations:

11. PhilML2023: Philosophy of Science Meets Machine Learning, September 2023
"*Catalyzation or Calcification? Concept Development and Machine Learning"*

10. Measuring the Human: New developments in the epistemology of measurement in the human sciences, July 2023
"Regulative Operationalism"

9. British Society for the Philosophy of Science Annual Conference 2023, July 2023
"Regulative Operationalism"

8. The Society for Philosophy and Technology Conference – Technology and Mobility, June 2023
"AI and Social Mobility: A Study at the Intersection of the Ethics and Epistemology of Technology"

7. Cambridge Early Career Workshop in the Philosophy of Measurement, April 2023
"Cambridge Early Career Workshop in the Philosophy of Measurement"

6. Society for Philosophy of Science in Practice Ninth Biennial Conference, July 2022
"The Predictive Reframing of Supervised Machine Learning Applications"

5. Measurement at the Crossroads, June 2022
"The Predictive Reframing of Supervised Machine Learning Applications"

4. Workshop on Bias and Discrimination in Algorithmic Decision-Making, October 2021
"Good Predictions and Bad Measurements"

3. Biennial Conference of the European Philosophy of Science Association, September 2021
"Measurement and Machine Learning"

2. The Society for Philosophy and Technology Conference – Technological Imaginaries, June 2021
"AI Narratives and How Machine Learning "Measures'"

1. Boston University Graduate Student Philosophy Conference, April 2021
"How Machine Learning "Measures" and What We Can Learn From It"

Invited Talks:

1. The University of Edinburgh Workshop on Artificial Intelligence and the Christian Churches, February 2023
"What Counts? Models, Measurement, and Machine Learning"

SUMMER SCHOOL AND TRAINING PROGRAMS

2022 - 2023	Data-Driven Entrepreneurship Venture Builder Incubator
2021	Oxford Machine Learning Summer School: ML for Social Good

PROFESSIONAL EXPERIENCE

2019	**ZF Friedrichshafen** Big Data Engineer
2018	**Zürcher Kantonalbank** Big Data Analytics Administrator
2017 - 2018	**Migros** Intern, Hadoop Data Administration

AWARDS AND GRANTS

2022	University of Edinburgh Incubator Grant for the commercialization of PhD research
2021	Baillie Gifford PhD Studentship in AI/Data Ethics
2020	Duke University Dean's Research Award 2020/2021
2019	Duke Science and Society Leadership Award 2019
2019	Fulbright Scholarship
2017	BW/UNC Exchange Grant
2017	UNC Chapel Hill Dean's List

TEACHING

2023	Teaching Assistant, Ethical Data Futures, University of Edinburgh
2022	Tutor, Professional Issues in Computer Science, University of Edinburgh
2022	Tutor, Philosophy of Science, University of Edinburgh
2022 & 2023	Tutor, Logic 1, University of Edinburgh
2021	Tutor, Morality and Value, University of Edinburgh
2019	Teaching Assistant, Ethics and Legal Issues in Business Analytics

LEADERSHIP & COMMUNITY ENGAGEMENT

Big Ethics
Founded non-profit to engage students on the social and ethical implications of artificial intelligence and big data

Political Engagement
Contested and engaged in university and local, and national politics (including internship at the German Bundestag)

SKILLS & LANGUAGE

Language: German (native), English (near-native – TOEFL 116), French (excellent command – C1), Spanish (good command – B2)

Programming: Python, Java, SAS, SQL, Bash scripting, JavaScript, TypeScript

Technologies: Big Data Administration, Machine Learning, Server Management, CMS