

ROSELINE POLLE

AI GOVERNANCE, RISK & COMPLIANCE | SHE/THEY

Skills:

ML AUDITING, BIAS ANALYSIS & MITIGATION, INTERPRETABILITY
PYTORCH, TENSORFLOW, GIT, DASH,
DOCKER, POETRY, STREAMLIT

Fluent in:

English | French



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WORK EXPERIENCE

Machine Learning Researcher

2024 | THYMIA | thymia.ai

Investigated the effect of confounds on performance metrics for detection of depression in speech audio samples. Submission at Interspeech 2024 in review.

Performed a systematic study on how to ensemble audio embeddings to enhance model performance.

Responsible AI Auditor and Researcher

2021-2024 | HOLISTIC AI | <https://www.holisticai.com/>

Developed and performed AI system audits, qualitative and technical, for Bias, Robustness, Transparency and Privacy with applications in recruitment, financial services, llms.

Product development of the AI Governance, Risk and Compliance Platform in cooperation with Engineering team and Customer Success.

Designed and delivered courses for data scientists and students with the Alan Turing Institute on Measuring and Mitigating Biases.

Research Assistant

2022 | IMPERIAL COLLEGE LONDON

Developed the Disruption Index to map and track technological disruption across the UK for the joint project *The Pissarides Review into the Future of Work and Wellbeing* by the Institute of the Future of Work (IFOW) and Imperial College.

Graduate Researcher

2020 | UCL LOVE LAB

Investigated neural networks models for aligning multimodal embeddings representing similar cognitive concepts. Implemented unsupervised learning objectives inspired from the GAN literature (cycle-consistency and maximum likelihood under a Gaussian Mixture Model) in Tensorflow.

Computational Analyst

2017-2019 | BLOOMBERG NEW ENERGY FINANCE

Production-ready Python/ VBA models for Bloomberg's clients.

Modelling Engineer

2014-2017 | HIGHVIEW POWER

Computational models and tools for a new energy storage technology. Engagement with energy storage policy makers.

EDUCATION

MSc Machine Learning

2019-2020 | UCL

Unsupervised Learning, Approximate Inference, Supervised Learning, Machine Vision, NLP, Reinforcement Learning, Bioinformatics.

Diplome d'Ingenieur

2010-2014 | ECOLE POLYTECHNIQUE

Mathematics, Applied Mathematics, Informatics, Statistics, Physics, Economics.

PUBLICATIONS

Hilliard A, Kazim E, Koshiyama A, Zannone S, Trengove M, Kingsman N, Polle R. *Regulating the robots: NYC mandates bias audits for ai-driven employment decisions*. Available at SSRN 4083189. 2022 Apr 13.

Kingsman N, Kazim E, Chaudhry A, Hilliard A, Koshiyama A, Polle R, Pavey G, Mohammed U. *Public sector AI transparency standard: UK Government seeks to lead by example*. Discover Artificial Intelligence. 2022 Feb 21;2(1):2.

Kazim E, Koshiyama AS, Hilliard A, Polle R. *Systematizing audit in algorithmic recruitment*. Journal of Intelligence. 2021 Sep 17;9(3):46.

Polle R, Kazim E, Carvalho G, Koshiyama A, Inness C, Knight A, Gorski C, Barber D, Lomas E, Yilmaz E and Thompson G. *Towards AI standards: thought-leadership in AI legal, ethical and safety specifications through experimentation*. 2021.

TALKS & COURSES

Devovx UK 2023. [Bias in Machine Learning](#)

Developed & Delivered Turing Institute online courses:

[Assessing and Mitigating Bias and Discrimination in AI](#).

[Assessing and mitigating bias and discrimination in AI: Beyond binary classification](#)

INTERESTS

Football (captain), Climbing, Cycling, Movies

Data sonification of open-source football data: <https://football-opera.up.railway.app/>
