CURRICULUM VITAE **ANDREW WANG** *(he/him)*

andrewwang27
andrewwango.github.io
andrew.wang@ed.ac.uk
Google Scholar
Edinburgh, UK

PhD student in ML for imaging at the University of Edinburgh.

Freelance data scientist with a wide range of skills. [website]

Campaigner, speaker and writer on access to nature. [about]

Speak to me in 🇫🇷 🇨🇳 🇬🇧 !

EDUCATION

'23-'27 **PhD, School of Engineering, University of Edinburgh**

- **Focus:** Unsupervised deep learning algorithms for solving inverse imaging problems. We rarely have ground truth in many critical imaging scenarios, such as accelerating medical imaging, higher resolution Earth observation, electron microscopy. Supervised by Prof. Mike Davies.
- **Interests:** Computer vision, deep learning, inverse problems, medical imaging, Earth observation

'18-'22 **MEng Information & Computer Engineering, University of Cambridge** Distinction (first class)

PROFESSIONAL EXPERIENCE

Data Scientist / AI Engineer *Kainos, Birmingham (08/'22-08/'23)*

- **Client** Workday | Security analysis tool using graph data science — **Skills** `networkx`, Neo4j
- **Client** DVSA | Geospatial network recommendation tool — **Skills** PostGIS, QGIS, OS MasterMap
- **Client** Internal | Curated internal MLOps & CI/CD best practices — **Skills** Azure ML, Azure DevOps
- **Client** Internal | Gov.uk web intelligent search bar — **Skills** OpenAI API, web-dev

Data Science Consultant Intern [blog] *Data Reply UK, London (05-07/'21)*

RESEARCH AND PUBLICATIONS

[paper] **Conference paper.** A. Wang, M. Davies, *"Fully Unsupervised Dynamic MRI Reconstruction via Diffeo-Temporal Equivariance"*, in preprint, arXiv:2410.08646 [eess.IV], 2024. [blog]

[paper] **Conference paper.** A. Wang, M. Davies, *"Perspective-Equivariance for Unsupervised Imaging with Camera Geometry"*, European Conference on Computer Vision (ECCV) TradiCV Workshop (Oral), 2024. Oral at the Maths4DL Geometric Deep Learning workshop, June 2024. [blog] [poster]

[website] **Open-source.** J. Tachella, D. Chen, S. Hurault, M. Terris, A. Wang, *"DeepInverse: A deep learning framework for inverse problems in imaging"*. Lead developer, 2024-current. [blog]

[thesis] **Master's research in physics-informed ML.** *"Dynamic latent spaces with statistical finite elements"*, 2022.

[paper] **With Alan Turing Institute.** J. Walsh, O. Kesa, A. Wang et al., *"Near Real-Time Social Distance Estimation in London"*, **The Computer Journal**, 2023. Winner of OUP Wilkes Award 2024. [press] [press2] [blog]

[paper] **With CentraleSupélec.** P. Houdouin, A. Wang et al., *"Robust Classification with Flexible Discriminant Analysis in Heterogeneous Data"*, IEEE International Conference on Acoustics, Speech and Signal Processing, 2022. [blog]

SKILLS

Languages: English (native), French (CEFR C2 – fluent), Mandarin (native), German (CEFR B2)

please turn over.

Certifications: certified on AWS, certified Azure and Azure AI, SQL for Data Science, Neo4j Graph Data Scientist, Green Software Practitioner

Software: Agile dev, GitHub CI/CD, Docker, Unix, MLFlow, `wandb`, Tableau, TypeScript, MATLAB, C++

Python: `pandas`, `matplotlib`, OpenCV, PyTorch, `scikit-learn`, `tensorflow` basics, `seaborn`, `plotly`, `nltk`, `jupyter`, `networkx`, `streamlit`. Clean code, functional programming and test-driven dev.

Geospatial: QGIS, PostGIS, OpenStreetMap API, OS MasterMap, Google Maps API, `geopandas`, `folium`