

<a href="#">andrewwang27</a>		PhD student in ML for imaging at the University of Edinburgh.
<a href="#">andrewwango.github.io</a>		Freelance data scientist with a wide range of skills. <a href="#">[website]</a>
<a href="#">andrew.wang@ed.ac.uk</a>		Campaigner, speaker and writer on access to nature. <a href="#">[about]</a>
<a href="#">Google Scholar</a>		
Edinburgh, UK		
March 2000		Speak to me in    !

## EDUCATION

09/23-04/27 **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

09/18-07/22 **MEng Information & Computer Engineering, University of Cambridge** Distinction: 1<sup>st</sup> class

## PROFESSIONAL EXPERIENCE

### Data Scientist / AI Engineer

- Client Workday | Security analysis tool using graph data science
- Client DVSA | Geospatial network recommendation tool
- Client Internal | Curated internal MLOps & CI/CD best practices
- Client Internal | Gov.uk web intelligent search bar

*Kainos, Birmingham (07/22-09/23)*

**Skills** Neo4j

**Skills** PostGIS, QGIS, OS MasterMap

**Skills** Azure ML, Azure DevOps

**Skills** OpenAI API, web-dev

### Data Science Consultant Intern [\[blog\]](#)

*Data Reply UK, London (05-07/21)*

## RESEARCH PUBLICATIONS

[\[paper\]](#) **Preprint.** A. Wang, M. Davies, "Benchmarking Self-Supervised Methods for Accelerated MRI Reconstruction", on arXiv, 2025. [\[tutorial\]](#)

[\[paper\]](#) **Conference paper.** A. Wang, M. Davies, "Fully Unsupervised Dynamic MRI Reconstruction via Diffeo-Temporal Equivariance", IEEE International Symposium on Biomedical Imaging (ISBI), Houston, 2025. [\[blog\]](#)

[\[paper\]](#) **Conference paper.** A. Wang, M. Davies, "Perspective-Equivariance for Unsupervised Imaging with Camera Geometry", IEEE/CVF European Conference on Computer Vision (ECCV) TradiCV Workshop (Oral), 2024. [\[blog\]](#)

[\[thesis\]](#) **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. [\[blog\]](#)

## SPEAKING

[\[website\]](#) **Tutorial.** "DeepInverse: a PyTorch library for imaging with deep learning", ISBI, Houston, Apr 2025.

[\[website\]](#) **Seminar.** "Learning to solve imaging inverse problems without ground truth", IFML, UT Austin, Apr 2025.

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[video] **Seminar.** "Equivariant imaging with groups of real-world transforms", Maxwell Inst., Edinburgh, Feb 2025.

[poster] **Workshop.** "Learning to reconstruct accelerated dynamic MRI without ground truth", International Workshop on Mathematical Imaging and AI Algorithms, IPTA 2024, University of Strathclyde, Glasgow, Dec 2024.

[poster] **Workshop.** "Perspective-Equivariant Imaging: an Unsupervised Framework for Pansharpening", Maths4DL Geometric Deep Learning workshop, University of Cambridge, June 2024.

## OTHER RESEARCH ACTIVITIES

[website] **Open-source.** J. Tachella, M. Terris, S. Hurault, A. Wang, "*DeepInverse: a PyTorch library for imaging inverse problems with deep learning*". Lead developer, 2024-current. Contributions include [GANs](#), [advanced MRI](#), [satellite imaging for remote sensing](#), [equivariant imaging](#), [invertible image transforms](#), [self-supervised algorithms](#). [blog]

[course] **Teaching assistant.** *Machine Learning Practical* Year 4 course at the School of Informatics at Edinburgh.

## FREELANCE

Please see my [website](#) for previous projects including data analysis, geospatial data, web dev & ML.

## SKILLS

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

**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`