CURRICULUM VITAE ANDREW WANG

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Data scientist and researcher passionate about using ML and data analytics to improve human lives and environmental sustainability. Check out my data science projects on my portfolio.

Campaigner for better access to the outdoors for everyone. Language enthusiast and musician. Speak to me in 🇫🇷🇨🇳🇬🇧🇩🇪!

EDUCATION

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

- Final year topics: Machine Learning, Deep Learning, Computational Statistics, Computer Systems, Computational Neuroscience, Advanced Robotics, Management. Top of college cohort (size 9).
- Years 1-3: first class; topics included signal processing, control theory, information theory, electrical mechanical, structural, thermofluids and materials engineering.

'11-'18: The Manchester Grammar School

PROFESSIONAL EXPERIENCE

Artificial Intelligence Engineer *Kainos, Birmingham (08/'22-)*

- Developing internal maturity for MLOps and AI as a Service on Microsoft Azure.

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

- Developed MVP for an NLP solution, which has been made public on AWS Marketplace.

Research Internship [blog] *CentraleSupélec, Paris (03/'21-now)*

Data Science Researcher [article] [blog] *Alan Turing Institute (03-06/'20)*

RESEARCH EXPERIENCE

[link] **Master's research in physics-informed ML.** *"Dynamic latent spaces with statistical finite elements"*. 2022. Explored and demonstrated the use of variational autoencoders for high-dimensional data for physics-informed ML and digital twins. Results from this work contributed to the team's paper submitted to ICLR.

[link] **With Alan Turing Institute.** J. Walsh, O. Kesa, A. Wang, M. Ilas, P. O'Hara, O. Giles, N. Dhir, M. Girolami and T. Damoulas, *"Near Real-Time Social Distance Estimation in London,"* arXiv:2012.07751 [cs.CY], Dec. 2020**. Accepted at The Computer Journal**. Explored object detection and perspective mapping measuring social distancing in 900 cameras across London. The algorithm was used widely by London authorities during COVID lockdowns. **Contribution:** conception, development, experimentation and write-up of camera calibration algorithms.

[link] **With CentraleSupélec.** P. Houdouin, A. Wang, M. Jonckheere and F. Pascal, *"Robust Classification with Flexible Discriminant Analysis in Heterogeneous Data,"* 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022. Developed a novel robust QDA-type classifier for highly non-Gaussian, non-i.i.d distributions. **Contribution:** development, experimentation and write-up of algorithm, publication of code-base.

SKILLS

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

Coding: Python (numpy, pandas, OpenCV, PyTorch, scikit-learn, TensorFlow basics, seaborn, plotly, nltk, jupyter, networkx), SQL for Data Science, MATLAB, Neo4j, Unity C#, C++, Android Kotlin, Java basics. Received training in clean Python code, functional programming, test-driven development.

Tools: certified on AWS, certified Azure and Azure AI, Git and DevOps with GitHub, MLFlow, Agile development, Tableau, Docker, Unix.