Alex Wendland

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PERSONAL STATEMENT

Ethical, data-driven Python programmer with a passion for automation, mathematics, and problem-solving. I am high motivated to drive measurable improvements in impactful areas in all aspects of my life.

EMPLOYMENT HISTORY

2023–CURRENT

Engineer – MAN GROUP, LONDON

- Migrated internal users off a database costing £1 million per year by scaling an Apache Arrow Flight server from handling 10 connections per day to 5 connections per second. This solution was hosted in Kubernetes, used a custom SQL dialect, and was secured over TLS using OAuth for authentication.
- Executed a critical Python distribution upgrade with no production outages, impacting over 200 ETL pipelines owned by various teams.
- Increased code quality by building automated code reviews using an in-house LLM, FastAPI, and Bitbucket API. This system allows per-repo configuration and supports review processes in different programming languages.
- Addressed data platform funding for Snowflake by developing business unit-level accounting for usage, with warehouse tracking, resource monitors, and role privileges.
- Improved developer experience in a repository with 80 active monthly users by introducing tools like mypy, pre-commit, and Ruff.

2021–2023

Data Scientist/Head of Data – CC DATA, LONDON

- Reduced Azure cloud storage costs by 50% and year-on-year costs by 60% through implementing tiering policies, optimizing data formats, and improving retention strategies.
- Secured clients worth £60k/year by calculating historical and daily order book metrics on over 100TB of data using NumPy, Docker, and Azure Blob Storage.
- Addressed customer reliability complaints by migrating data delivers to use Docker orchestrated in Kubernetes with monitoring through Loki/Grafana.
- Expanded product range by researching, prototyping, and developing a blockchain data product to store, analyze, and standardize on-chain data.

2020–2021

Civil Service, Science and Engineering Fast Stream – CABINET OFFICE, LONDON

- Project-managed high-profile scientific advice to the government in the Advisory Council for the Misuse of Drugs: Advice on consumer cannabidiol and Barriers to research.
- Connected remote civil servants using a JavaScript application backed by Google Sheets that scaled to four different societies each with up to 600 users (still used as of 2024).

2015–2020

Researcher – UNIVERSITY OF WARWICK – DEPARTMENT OF MATHEMATICS

- Won multiple Academic awards building a strong research portfolio in leading journals such as Advances in Mathematics, Annals of Applied Probability and the Journal of Graph Theory.
- Worked with Centre for Science and Policy (NLP), Heathrow airport and Defence Science and Technology Laboratory (AI safety).
- Recognized as an award-winning teacher at all levels and formats, from lecturing master's level courses to providing one-on-one support for underprivileged A-Level students.

EDUCATION

2023 – current	Msc in COMPUTER SCIENCE, **Georgia Institute of Technology**, Online OMCSC with specialisation in Machine Learning (4.0 GPA current)
2015 – 2020	PhD in MATHEMATICS, **University of Warwick**, Coventry "Generalisations of Groups and Cayley Graphs" under the supervision of Agelos Georgakopoulos
2011 – 2015	Masters in MATHEMATICS, **University of Warwick**, Coventry 1st Class Hons (91% average)
2004 – 2011	Secondary school, **Beechen Cliff School**, Bath A Levels: Further Maths (A^*), Maths (A^*), Physics (A)

KEY SKILLS

Programming languages:	**Python**, C, SQL, and JavaScript
Tools:	Git, Docker, Kubernetes, Azure, LaTeX and Snowflake.
Transferable:	Problem solving, Project Management, and Communication.
Specialised skills:	Machine learning, Data anaylsis, Cloud computing, and Blockchain.