

# Alex Wendland

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## Experience

<b>Engineer</b>	Man group	07/2023 - Present
<ul style="list-style-type: none"><li>Enabled annual database cost savings of £1M by scaling an Apache Arrow Flight server from 10 requests/day to 50 requests/second.</li><li>Boosted fund chargeback by £80K/year by implementing Snowflake cost monitoring.</li><li>Led a multi-team initiative to integrate LLM-powered code reviews in Bitbucket.</li><li>Upgraded Python distribution for 500+ ETL pipelines with zero production downtime.</li><li>Enhanced developer experience for 80+ active users with tools like mypy, pre-commit, Ruff, and Typos.</li></ul>		
<b>Head of Data</b>	CC Data	09/2021 - 06/2023
<ul style="list-style-type: none"><li>Reduced Azure cloud storage costs by £60K/year (50%) and cut year-on-year costs by 60% through tiering policies, data format optimization, and retention strategies.</li><li>Secured clients worth £60,000/year by calculating historical and daily order book metrics on over 100TB of data using NumPy, Docker, and Azure Blob Storage.</li><li>Addressed customer reliability complaints by migrating data delivers to use Docker orchestrated in Kubernetes with monitoring through Loki/Grafana.</li><li>Expanded product range by researching, prototyping, and developing a blockchain data product to store, analyze, and standardize on-chain data.</li></ul>		
<b>Science and Engineering Fast Stream</b>	Civil Service	10/2020 - 09/2021
<ul style="list-style-type: none"><li>Project-managed high-profile scientific advice to the government in the <a href="#">Advisory Council for the Misuse of Drugs: Advice on consumer cannabidiol</a> and <a href="#">Barriers to research</a>.</li><li>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).</li></ul>		
<b>Researcher and lecturer</b>	University of Warwick	09/2015 - 09/2020
<ul style="list-style-type: none"><li>Won multiple Academic awards building a strong research portfolio by publishing in leading journals such as <a href="#">Advances in Mathematics</a>, <a href="#">Annals of Applied Probability</a> and the <a href="#">Journal of Graph Theory</a>.</li><li>Worked with <a href="#">Centre for Science and Policy</a> (NLP), <a href="#">Heathrow airport</a> and <a href="#">Defence Science and Technology Laboratory</a> (AI safety).</li><li>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.</li></ul>		

## Education

<b>Masters in Computer Science</b> Georgia Institute of Technology, Atlanta, USA	4.0 GPA (current average)	2023/09 - Present
<b>PhD in Mathematics</b> University of Warwick, Coventry, UK	Generalisations of Cayley graphs and groups	09/2015 - 03/2020
<b>Masters in Mathematics</b> University of Warwick, Coventry, UK	1st Class Honors (91% average)	09/2011 - 07/2015

## Skills

**Programming Languages:** Python, SQL, JavaScript, C, LaTeX

**Tools and Frameworks:** Pandas, Numpy, SQLAlchemy, FastAPI, Pydantic, Apache Arrow, Kubernetes, Docker, Airflow, Snowflake, Azure cloud, Dataiku, NLTK, ArcticDB, MongoDB

**Collaboration and productivity:** JIRA, Bitbucket, Github, Confluence, Obsidian, Neovim, Nix