Alex Wendland

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Experience

Software Engineer   Man Group   07/2023 - Present

- Built an event-driven data quality framework on top of Kafka, Ray and Postgres. Adopted by 3 teams and deployed to over 50 datasets.
- Enabled annual database cost savings of £250K/year by migrating to a horizontally scaled Apache Arrow Flight server handling 1 Gi/second.
- Sought to triple datasets onboarding from 50 to 150 datasets per year by moving to a medallion data architecture backed by iceberg and a low code custom EL framework.
- Boosted fund chargeback by £80K/year by implementing Snowflake cost monitoring.
- Led a multi-team initiative to integrate LLM-powered code reviews in Bitbucket used by 70 repos internally.

Head of Data   CC Data   09/2021 - 06/2023

- Reduced Azure cloud storage costs by £60K/year (50%) through tiering policies, data format optimization, and 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.
- Expanded product range by researching, prototyping, and developing a blockchain data product to store, analyze, and standardize on-chain data.

Science and Engineering Leadership Scheme   UK Government   10/2020 - 09/2021

- Managed high-profile scientific advice to the government in the Advisory Council for the Misuse of Drugs writing two 40+ page reports (e.g. Advice on consumer cannabidiol and Barriers to research).
- Facilitated social connection of remote civil servants using a JavaScript application backed by Google Sheets that scaled to four different organisations each with up to 600 users (still used as of 2024).

Researcher and lecturer   University of Warwick   09/2015 - 09/2020

- Won multiple academic awards building a strong research portfolio by publishing 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 (logistics modeling) and Defence Science and Technology Laboratory (AI safety).
- Award-winning teacher with experience in all levels and formats, from lecturing master's level courses to providing one-on-one support for underprivileged A-Level students.

Education

Masters in Computer Science   4.0 GPA (current average)   2023/09 - Present
Georgia Institute of Technology, Atlanta, USA

PhD in Mathematics   Generalisations of Cayley graphs and groups   09/2015 - 03/2020
University of Warwick, Coventry, UK

Masters in Mathematics   1st Class Honors (91% average)   09/2011 - 07/2015
University of Warwick, Coventry, UK

Skills

Programming Languages: Python, SQL, Typescript, C, LaTeX, Nix, Lua.

Tools and Frameworks: Pandas, Numpy, SQLAlchemy, FastAPI, Pydantic, Apache Arrow, Kubernetes, Docker, Apache Iceberg, Snowflake, Azure Cloud, NLTK, ArcticDB, MongoDB, Grafana, Prometheus, OpenTelemtry, Sentry, Kafka, Postgres, Ray, React, NextJS.

Collaboration and productivity: JIRA, Bitbucket, Github, Confluence, Obsidian, Neovim, NixOS.