Jack Wardell

Data Engineer / Software Engineer

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Profile

ONE-LINER

I am a resourceful, curious and pragmatic software developer who genuinely enjoys learning, solving and building.

SUMMARY

- Python developer and software engineer — specialising in data engineering (e.g. SQL, Pandas, Numpy, Sklearn) and full stack web development (e.g. Flask, Bootstrap4, JQuery, SQLAlchemy, PostgreSQL, Docker)
- Open source developer: packages on pip, many projects and repos on GitHub and contributions to open source libraries like Flask
- Technical experience in: data ingestion (e.g. scraping, websockets, APIs), databases (e.g. PostgreSQL, Redis), mission-critical applications, webdev, REST APIs, TDD, end-to-end testing (e.g. Selenium), DevOps & CI/CD, diagnostics, Docker and microservices
- Extensive knowledge of: agile frameworks (e.g. Kanban), the lean startup approach, OKRs and mutual learning
- Hands-on experience with cloud and other technologies: Azure, AWS, Heroku, Tableau, PowerBI, Alteryx and Streamsets
- Values: simplicity, respect, compassion, curiosity, honesty, customer collaboration, feedback and adapting to change

Employment History

CO-FOUNDER AT MIZAR: *Oct 2019 - Present, London*

- Role: Chief data officer
- Business Aim: To build a cryptocurrency trading platform where quants can build algo-trading strategies which others can invest in
- Delivered:
  - All historic trades and all live trades (trades happening right now) ingested into our system from Binance
  - Full CI/CD pipeline deploying microservices (e.g. Kafka, Postgres, Redis) onto AWS kubernetes (EKS)
  - Live trading infrastructure built and deployed (e.g. webapp, strategy management, execution engine)
  - Open-source libraries that let you build machine learning models (on top of Sklearn) and deploy them to our trading infrastructure
  - A rich featured webapp that integrates with a Binance API key to allow for subscription to algo-trading strategies
- Stack: Python, Javascript, Flask, SQLAlchemy, Kubernetes, Docker, Postgres, Kafka, Redis, AWS (e.g. EC2, EKS, RDS)

BACKEND ENGINEER AT MONZO BANK: *March 2021 - Present, London*

- Role: Backend engineer securely and competently building and maintaining the data platform in Monzo
- Stack: Go, Kubernetes, Python, dbt, GCP, BigQuery

AI ENGINEER AT SHELL: *Dec 2019 - Feb 2021, London*

- Role: Promotion from previous role after comprehensive training in machine learning (e.g. Udacity), in the same team
- Delivered:
  - Ad-hoc model creation and model deployment on Azure
  - Feature selection and hyperparameter tuning in kubernetes
  - A self-service Flask webapp that allows users to build machine learning models with a UI
  - Migration of monolithic codebase to microservices in kubernetes

DATA ENGINEER AT SHELL: *June 2018 - Dec 2019, London*

- Role: On-site consultant data engineer in ScrumBan agile team, using the lean start-up approach and collaborating with the customer weekly
- Business Aim: To optimise internal customer decision making by applying machine learning to various discrete signals from multiple sources

- Delivered:
  - Version control & CI/CD
  - Data ingestion from multiple sources, processing & persistence
  - A machine learning pipeline
  - A mission-critical advanced web application
- Stack: Python, Flask, SQLAlchemy, Pandas, Numpy, Sklearn, Celery, JQuery, Bootstrap4, Git, Jenkins, Azure, PostgreSQL, Redis, Docker, Kubernetes, Scrum, Kanban, Lean Startup, Mutual Learning, Jira, Slack, ACT and RFT
- Internally awarded prizes within Shell: 'Code Masters Award', 'Downstream Directors Award' and the 'Increasing Profitability In The Base Business Award'

BIG DATA ENGINEER AT KUBRICK GROUP: *Feb 2018 - Feb 2021, London*

- Role: Rigorously trained on-site for 4 months in the discipline of big data engineering; learning technical, business and soft skills
- Stack: Python, SQL (e.g. T-SQL, Microsoft SQL Server), NoSQL (e.g. MongoDB), Spark (e.g. Hadoop, Hive), Excel, GDPR and data security

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Education

UCL: MSCI CHEMISTRY: *London*

- 3rd Year dissertation on 'Structural Defects in Metal–Organic Frameworks' under Prof. Ben Slater
- 4th Year advanced chemical project on 'Synthesis and Study of Exotic Magnets — Engineering New Quantum States' under Prof. Andrew Wills
- Grade: 2.1

ABINGDON SCHOOL: *Oxford*

- A-levels: Chemistry A*, Maths A*, Further Maths B, Art A

Skills

KEY SKILLS:

- Core skills: communication, coaching others and quick learner
- Data engineering: data ingestion, data pipelines, AI/ML engineering, data analysis, data modelling and machine learning
- Software engineering: back end & frond end engineering, databases, testing, SOLID, APIs, design, cloud technologies
- Agile & other methodologies: Scrum, Kanban, Lean, XP, OKRs, mutual learning and DevOps
- Other: chemistry, maths, Microsoft Office, public speaking, horticulture and trading

LANGUAGES, LIBRARIES, ETC:

- Python, SQL, HTML, CSS, Javascript, Flask, JQuery, Bootstrap4, Jinja2, Pandas, Numpy, Sklearn, SQLAlchemy, PostgreSQL, Docker, Git and Click

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Other

PROJECTS:

- Antipode Coefficient (https://www.antipodecoefficient.com/)
  - Built a website to calculate the antipode coefficient between two points. The basic idea is that two locations can be described with a number between 0 and 1. Given a location, 0 would be the same location and 1 would be the antipode, the location perfectly opposite on the globe
- SlackTime (https://github.com/jackwardell/SlackTime)
  - Built a simple, fast and intuitive python package for the Slack WebAPI

LEARNING:

- Machine Learning Nanodegree — Udacity
  - Completed multiple projects on supervised and unsupervised learning, with Sklearn and PyTorch
  - Stack: Ensemble models, Bayesian models, SVMs, image classifiers, PCA, Sklearn, PyTorch, Matplotlib, Seaborn, Pandas and Numpy
- Accelerated Computer Science Fundamentals Specialization — University OF Illinois at Urbana-Champaign (through Coursera)
- Easy to Advanced Data Structures — William Fiset (through Udemy)