

James Teversham

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- Profile** I am an ambitious, bold and fiercely curious person with a passion for understanding the inner workings of almost everything. My core interests and skills lie in data science & ML and quantitative analytics. I have a real affinity for programming and am comfortable with full stack software development and building fully integrated end-to-end systems, particularly using Django and Python-based backends and Vue.js frontends. I'm a firm believer that being a capable software developer is crucial to being a great data scientist/ML engineer.
- Education** **Imperial College London** London · 2020 - present (1 year)
MSc in Applied Machine Learning. Anticipated first class award.
- University of Cape Town** Cape Town · 2015 - 2018 (4 years)
Bsc (Eng) Mechatronics with a final GPA of 85.75%. Ranked 3rd in Mechatronics Engineering. 87% for final year research project.
- Technical Experience** **ML Engineering Consultant** Remote · 2020 - present (10 months)
Independently developed a recommender system for a large healthcare consulting/counselling company in South Africa. The system was designed to predict the probability of an ill or injured worker returning to work given their clinical and vocational data; a major concern for the company and their insurers alike. This required extensive feature engineering and the design of carefully-designed embeddings to best capture clinical information. The end-to-end system with a database, API, prediction and configuration UI and a server-side ML model exposed by the API.
Technologies: Python, Numpy, Pandas, XGBoost, Flask, Jupyter Notebooks, Vue.js, MongoDB, GCP, Mongo Atlas
- Full Stack Software Consultant** Remote · 2020 - present (8 months)
Developed an end-to-end system for a agri-tech startup that produces smart pods to grow virtually any small plant or vegetable using a fully autonomous environmental control system. In particular, I designed an extensive backend core using Django for communicating with the embedded control system, interfacing with the Postgres DB and serving data to the front end. I created a mobile-focussed web app to interact with the growth environment. The app also offered basic social and e-commerce functionality.
Technologies: Python, Django, Js, Vue.js, PostgreSQL, AWS
- Data Scientist at Invictus Capital** Cape Town CBD · 2019 - 2020 (16 months)
A very broad role mostly involved with extensive exploratory data analysis and algorithm development for various crypto derivative trading strategies. However, I also spent much time preparing strategies for live deployment in a micro services cluster, as well as developing analytics dashboards for strategy configuration and monitoring. Projects included directional strategies using deep reinforcement learning and tree-based decision systems, high frequency market-neutral strategies such as index and statistical arbitrage in futures markets, as well as cointegration/pairs trading. Also designed spam/fraud detection systems for company sign up processes and built a distributed cloud data processing pipeline for feature engineering on terabytes of historical trade data..
Technologies: Python, Flask, Numpy, Pandas, Keras, Tensorflow, Apache Spark & Beam, Js, Vue.js, GCP, GraphQL, PostgreSQL
- Graduate Software Developer at Dariel Solutions** Johannesburg · 2019 (3 months)
Worked on a number of cross-discipline projects that required developing and interfacing with embedded systems, as well as creating high level web-based gateways for clients to interact with. Backend work primarily done in Node with Express for API development.
Technologies: Node, Express.js, Vue.js, C, C++, Python, MySQL
- Software Engineering Intern at WeFix** Cape Town · 2017 (1 month)
Extended the company's product listing API using Python micro-frameworks and worked with the UI team to develop a new website that was later used commercially.
Technologies: Python, Flask, Jekyll, PostgreSQL

Technical Skills

Web (frontend)

Javascript, Vue.js, Electron, TailwindCSS

Web (backend)

Python (Django, Flask), Node (Express)

Embedded and other

C, C++, MicroPython, ARM STM32

Data science and ML

Pandas, Scikit-learn, Numpy, Keras, Tensorflow

Data storage and manipulation

MongoDB, PostgreSQL, MySQL, GraphQL, SQL

DevOps and DevTools

Docker, GitlabCI, Kubernetes

Cloud

AWS, GCP

Misc

Git, Unix shell



Notable**Achievements****Listed Inventor on Pending Patent**

My final year project at UCT involved the development of a novel three-axis force sensor that performs in remarkably close agreement to the gold standard at a 50x reduced price. Following the validation of the sensor in trials at the Sports Science Institute of SA, a patent has been filed and published on the system (UK application 1917058.8)

Two UCT Class Medals

Class medals for finishing first in class for Computer Science for Engineers (97%) and Electrical Engineering I (90%) courses

UCT Engineering Dean's Merit List

Placed on Dean's Merit List for the Engineering and Built Environment Faculty for every year of study

Dux Scholar of South African College High School

Final average of 93.7% and lowest subject mark of 92% for NSC exams

Interests**Hiking, Trail Running, Beer**

In my off time, I love pretty much any outdoor activity. In particular, hiking and trail runs and especially scuba diving when I get the chance. Lastly, few things beat enjoying a beer with friends.

Tinkering, Experimenting and Learning

From creating WiFi-enabled sensors around my home, to UI/UX design, to developing new algorithmic trading strategies, I thoroughly enjoy tinkering and just learning and/or battling with pretty much anything that provides a bit of a challenge. I particularly enjoy creating useless inventions with electronics and software and working with my hands.

[References available on request](#)