

EXPERIENCE

Mesh-AI

London, UK

Senior Engineer, Lead Engineer

2023 - present

- Led development of FastAPI/SQLAlchemy backend for planning platform at National Grid
- Migrated Bloomberg pipeline to cloud at SEFE. Added asyncio to allow concurrent downloads
- Developed Drafting/VCS feature for plan database, accessible via SQL materialised views

Brevan Howard

London, UK

Python Developer - Risk Strat

2023

- Refactored quant notebook to production code and improved aggregations in SQL queries

Transpower

Wellington, NZ

Data Scientist

2020 - 2022

- Developed regression-based method to fit Tower health models to right-censored data
- Developed unit-tested library of utility functions to standardise health modelling approaches
- Built pipeline on EC2 to extract data from Oracle DB, model asset risk and generate reporting

Aurecon

Wellington, NZ

Control Systems Engineer

2018 - 2020

- Designed instrumentation and controls systems in aerospace, defence, food and water sectors
- Designed + delivered PLC rack and instrumentation for RAAF Amberley F-35 Engine Test Cell 1

SKILLS

Python, SQL, FastAPI, Pydantic, SQLAlchemy, RabbitMQ, Docker, LLMs, sklearn, Azure/AWS, CI/CD, Embedded Systems, Robotics, 3D Printing, CNC, CAD/CAM, Industrial Controls, Computer Vision

PROJECTS

OpenCam (3D Printing, Autodesk Fusion)

- A half-frame 35mm [film camera](#) with novel design, built from parts from a Kodak disposable

Semantic DBs (Word2vec, sentence transformers, embeddings)

- [Writeup](#) exploring a concept for storing relational data in semantic space

QUALIFICATIONS

Massey University

Palmerston North, NZ

Bachelor of Engineering with Honours, Majoring in Mechatronics

2014 - 2018

- Graduated with high Second Class, First Division Honours
- Papers on manufacturing design, computer vision, machine learning, electronics, robotics
- Designed and built robotic system to manipulate micro-scale (~20µm) objects, published in [AIM Conference](#) and [IJIRA](#) - dx.doi.org/10.1109/AIM.2018.8452683