

## EXPERIENCE

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**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. Included asyncio to scale processing to hundreds of concurrent requests, reducing data retrieval times by 80x
- 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-ready code and improved efficiency of 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

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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

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**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

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**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](https://doi.org/10.1109/AIM.2018.8452683)