

# MIMI REYBURN - ML ENGINEER

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## EDUCATION

### **Applied Machine Learning Programme** - Machine Learning Institute Jul - Sep 2023

6-week intensive programme followed by workshops (ongoing) teaching the full machine learning lifecycle, including cutting-edge AI architectures (Transformers, LLMs, Stable Diffusion), scalable MLOps and evaluation.

- Projects include fine-tuning Llama-2 7B on GPUs using QLoRA, developing a recommendation engine, and implementing CNN AutoEncoder and Transformer architectures in Python.
- Regular presentations to peers, applying academic research to real-world problems.

### **Design Engineering, MEng** - Imperial College London Sep 2018 - Jun 2022

A traditional engineering education with design principles from Imperial's Dyson School, driving innovative solutions to real-world problems. Modules include optimisation, robotics, data science and machine learning.

- **Graduated with First Class Honours, receiving 2 awards for contributions to the Imperial community.**
- Master's Thesis (81%): 'Machine Vision towards Reducing Household Food Waste'. Tackling food waste via inventory-tracking and novel freshness detection with TensorFlow, R-Pi & Google Coral TPU. [Read paper ->](#)
- Teaching assistant in Mechatronics and Engineering Mathematics through strong academic performance.

## EXPERIENCE

### **Machine Learning Engineer** - Oak Feb 2024 - Present

Sprint project contracted to develop rigorous evaluation tools for Oak's AI experiments, supporting UK teachers.

- Developed innovative tools to assess the quality of various LLMs in education contexts, enabling data-driven development and ensuring alignment with stakeholder needs.
- Fine-tuned GPT3.5-turbo, reducing latency with equivalent performance at <25% of the original cost.
- Presented LLM evaluation methodologies to AI experts at 10 Downing St and education foundations.

### **Software Engineer** - ION-O TECH Nov 2022 - Apr 2023

Six-month InnovateUK-funded project at a startup making batteries smarter, safer and more sustainable.

- Consulted Research Scientists to design and build a live e-bike battery data collection, analysis and presentation system with a custom Node.js web app and MQTT charging control.
- Designed and fabricated a custom PCB datalogger, collected 100k+ battery health data points.

### **Design Engineer Intern** - Emotech AI Apr - Sep 2021

Six-month placement at an AI startup, pioneering leading Multi-Modal AI Solutions and Speech Technologies.

- Built a dataset for a new supervised ML model for a key client. Contributed to a new contract win.

## SKILLS & INTERESTS

### **Machine Learning** - Training models to test hypotheses:

- Pragmatic programmer comfortable with Python, Node and Docker.
- Expertise in supervised and unsupervised learning (PyTorch, TF).
- Experienced in building datasets for custom model training.

### **Software Engineering** - Building projects from idea to execution:

- Confident in data visualisation with open-source tools.
- Strong foundation in MLOps for robust data pipelines.
- Excellent communication and presentation skills.

### **Interests**

- Personal projects exploring real-world problems: [View portfolio->](#)
- Sustainability & Tech for Good
- Cooking, creative coding, and ceramics.

