

# MIMI REYBURN - AI ENGINEER

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## EDUCATION

### Applied Machine Learning Bootcamp - Machine Learning Institute

Jul 2023 - Jan 2024

*6-week intensive followed by weekly workshops teaching cutting-edge AI architectures (incl. Transformers, LLMs, NLP), coupled with hands-on experience building and training in Python with scalable MLOps and evaluation.*

- Advanced coursework involving applying academic research to practical projects, including fine-tuning the Llama-2 7B model on GPUs using QLoRA, developing a recommendation engine, and implementing CNN AutoEncoder and Transformer architectures, all in Python.

### Design Engineering, MEng - Imperial

Sep 2018 - Jun 2022

*A highly creative and technical degree uniting design-thinking and engineering to deliver innovative solutions to real-world problems. A rigorous education in traditional engineering with user-centric design and enterprise.*

- Graduated with First Class Honours and 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 developing Oak's AI experiments and MLOps infrastructure to support teaching in the UK.*

- Established AI experiments for LLM evaluation and data pipelines for experiment tracking with MLOps. Proactively consulted User Researchers to ensure effective and appropriate product development.
- With AI Product Team, attended the Cabinet Office to offer insights on AI systems for the public domain.

### Hardware and 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 web app. Implemented remote charging control using MQTT.
- Developed a micro-mobility battery data logger, from rapid prototyping to a custom PCB, reducing the footprint of the previous model by 50% and collecting over 100k battery health data points.
- Refined practical electronics skills through a 40V battery teardown and rewiring e-bike systems.

### Design Engineer Intern - Emotech AI

Apr - Sep 2021

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

- Demonstrated leadership in curating an audio dataset, facilitating new product development and IP. Worked cross-functionally, coded time-saving Python scripts and hired 20 freelancers within budget.
- Built GUI for customer-facing app & UX/UI designs in Design Team, helping win a significant new contract.

## SKILLSET

### Machine Learning and Engineering - skilled in building to validate hypotheses & prototype demos:

- Pragmatic Python programmer and AI enthusiast with experience optimising LLMs for specific use cases and constructing robust data pipelines for AI solutions using MLOps and Docker.
- Proficient in building and training custom model architectures in PyTorch and TensorFlow.
- Versatile and confident prototyper in hardware, software, IoT and integrated systems.
- Experienced building engaging web experiences using Node.js, HTML, CSS and JavaScript.

### Design - a user-oriented and iterative approach to problem-solving and product development:

- Experienced in UX, usability and UI design, as well as, CAD, 3D printing and PCB design.
- Excellent communication and presentation skills.