OWEN J. THOMAS

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PROFILE

Enthusiastic MSc Theoretical Physics student at Kings College, London. I am a highly competent self-directed learner, and through my experiences I have honed strong practical skills - a result of thorough exposure to scientific problems through professional experience and independently led ventures. My programming skills were developed in this way through my research internship, and I extended these skills into data science and machine learning by creating independent projects, seen on my portfolio website linked here and at the top right of this page.

EDUCATION

Kings College London Present - 2026
Master of Science - MSc, Theoretical Physics (Part-time)

University of Exeter 2021 - 2024
Bachelor of Science - BSc (Hons), Physics

TECHNICAL SKILLS

Programming

- Python: Pandas, NumPy, Matplotlib for data analysis, DEDALUS for numerical simulation, hardware control/ automation.
- Machine Learning: TensorFlow for deep learning, scikit-learn for classical ML, experience independently building CNNs/ PINNs.
- Version control: Using Git through the command line.
- Web Development: static webpage design with HTML/ CSS (ojthomas7.github.io)

Scientific Analysis

- Working with numerical simulations for solving PDEs (Fluid dynamics dissertation project, 78 % 1st class).
- Theoretical and practical skill-set within fluid dynamics, working with Navier-Stokes/ mass conservation equations (Fluid dynamics exam, 76 % 1st class).
- Experience designing and conducting experiments, drawing meaningful conclusions.
- Strong mathematical and statistical skills, including advanced calculus, differential equations, and linear algebra.

PROFESSIONAL EXPERIENCE

Software Development Research Intern June - July 2024
University of Exeter - Centre for Metamaterial Research and Innovation (CMRI) *Exeter, Devon*

I held the position of a research intern under Dr. Calum Williams with the CMRI at the University of Exeter. My objective was to create a python program for hardware automation by communicating with each hardware components SDK, creating a hypercube of spectral data. The final work culminated in a singular python file with a GUI that allowed researchers to automate and conduct their experiments remotely.

AI Development and Training
Outlier AI - Mathematics Consulting *Remote*

I work part time as a model evaluator for Outlier AI, specifically working on the reinforcement of an LLM's mathematical capability. This includes inventing unique and original mathematical prompts that are sufficiently complex to stump the model, and then correcting the model so that it may go on to improve its reasoning ability within mathematics.