## Freddie Nicholson +44-7412-985538 | fgn21@ic.ac.uk fr3ddie.me | linkedin.com/in/freddienic/



#### **EDUCATION**

Imperial College London

South Kensington, London — MEng Design Engineering

OCT 2022 - JUL 2026

1st Year Grade: First Class Honours Modules Include: Research Computing, Applied Mathematics, Robotics Paid Outreach and Recruitment Student Ambassador, Residential Assistant and Undergrad. Teaching Assistant.

Abingdon School

SEPT 2016 - JUN 2021

A Levels: A\*AA (Computer Science, Mathematics, Physics)

### WORK EXPERIENCE

#### Oxford Sensors Ltd.

AUG 2023 - SEPT 2023

Embedded Software Intern, Bicester, United Kingdom

- Developed a C# weld tracking solution using computer vision processing to provide a custom solution for critical applications.
- Prototyping a feature-tracking machine learning model to score visuals, reducing false positives and leading to a
  more reliable detection rate.

**Apple Inc.** NOV 2021 - SEPT 2022

Associate Apple Solutions Consultant (AASC), Oxford, United Kingdom

- Acted as a business partner to every location I worked with, significantly impacting the Apple business, the retailer and its employees.
- Responsible for many aspects of the business, from inventory to merchandising to training and collaborating with the Apple UK channel program organisation.

**Abingdon School** 

JUN 2021 - SEPT 2022

Information Systems (IS) Development, Abingdon, United Kingdom

- Created a Python Django-based internal communication system, reducing org-wide emails by ~80% and delivering more relevant messages.
- Leading the technical development of a career personal development tracking system, bringing paper systems online, allowing for more flexible workflows.

### ATOM Science and Technology Festival

MAY 2021 - JUN 2021

Sci Cache Challenge App Developer, Remote, United Kingdom

• Developed Apple and Android apps for the festival, coordinating with 22 sponsors to create a virtual exploratory experience, allowing people to experience the festival safely during COVID-19.

### **PROJECTS**

OrionHack 23 - Winner

JUL 2023

Utilised PyTorch to create a unique mechanical neural network web-based simulation representing a 3D-printed physical model we designed to learn an XOR gate.

IC HACK 23 - Runner-Up

FEB 2023

Collaborated to build a unique fridge-based AI web app. The entry was described as 'outstanding' by title sponsor Cisco. Chosen as runner-up for the 'Create a Sustainable Future' challenge.

**Bouncer Swift AR - on App Store** 

APR 2023

Visualised a unique way to check mechanics calculations by modelling them in Augmented Reality (AR) using Swift Playgrounds. I gave a talk at NSLondon with a physical prototype I designed.

**OpenAl GPT Reasoning Eval Generator** 

MAR 2023

Created an open-source model of complex diagrammatic problems that OpenAI uses to benchmark their models.

### **AWARDS & KEY SKILLS**

# Gold Duke of Edinburgh Award

AUG 2021

Google Code-In (Open-Source) Grand Prize Winner

JUL 2019

Chosen as a grand prize winner for an expenses-paid trip to Google HQ in San Francisco. Mentored in 2019.

Programming: Python, Django, JavaScript, Node.js, MATLAB, C#, Swift, SQL, PHP, Java, React, HTML5, CSS, Angular, PyTorch, TensorFlow, OpenCV, Numpy, REST, API, JavaScript Skills: Adobe, Solidworks / CAD, Collaboration, Embedded Applications, Electronics, AI / Machine Learning, Computer Vision, Data Analysis, Linux / Unix, Project Management, Back-End Engineering, Leadership Hobbies: Imperial Cross Country & Athletics (committee member). Chair of AR / VR society.

Videos and more info on my website: fr3ddie.me