

# Jed Nelson

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**Mechanical Engineering student at Imperial College London** who learns fast and turns ideas into reality. Currently serving as CTO of a tech startup while maintaining first-class performance across three years. Thrives on crossing disciplines - from thermofluids to full-stack development to analogue electronics.

## Core Strengths

Clear communication and relationship building, team leadership, rapid learning, project delivery. Evidenced by close working relationships with Imperial faculty and peers, and leading startup development while maintaining academic excellence.

## Technical Projects and Experience

### **CTO & Lead Developer - Art Commissioning Platform (2024-Present)**

Building the MVP for Otterkin, a novel art commissioning startup launching beta September 2025. Full-stack development using Ruby on Rails.

### **Designed and Built a Cryo-Ultrasonic Testing Rig (2024-25)**

Third-year Design, Make and Test project with the Non-Destructive Evaluation lab. Designed to detect voids in metal 3D printed parts with complex geometries.

### **Software Engineer - Lambda Feedback (Summer 2024)**

Summer work for an ed-tech startup at Imperial. Built React-based user interfaces.

### **Browser-Based CFD Simulation (2025-Present)**

Using Golang and WASM to implement the SIMPLE algorithm in the browser with conjugate gradient method. Target: live browser simulation of vortex shedding.

### **Analogue Guitar Effects Development (2025-present)**

Designing analogue circuitry and PCBs to build my own electric guitar effects pedals.

### **Programmed an Interactive 2D CFD Solver (Spring 2024)**

Self directed learning project exploring advanced CFD concepts, implements a hybrid interpolation scheme based on Peclet number analysis. Built with Python and Pygame.

### **Built a Compressed Air Powered Car (Autumn 2023)**

Autumn term project in my second year. Led project team to achieve third place.

## Education

### **MEng Mechanical Engineering (2022-Present)**

At Imperial College London. Specialized in Thermofluids stream in my third year alongside Mechatronics, Stats and Computational Continuum Mechanics. Achieved a first-class honours over my first three years.

### **Four A Levels (2020-22)**

Maths (A\*), Further Maths (A\*), Physics (A\*) and RS (A), received the academic cup.

### **Twelve GCSEs, all grade 9 (2017-20)**