

Josh Williams

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EDUCATION

Imperial College London

London, United Kingdom

Meng Design Engineering, Year 1 (2:1 – 66%), Currently in 2nd year

Sept 2022 – June 2026

- Modules: Engineering Mathematics, Solid Mechanics, Mechatronics, Web App Development, Human Centred Design, Sustainable Design Engineering, Materials Science and Manufacturing.
- Societies: Sailing (3rd team member and involvement with committee), Cycling Society (organising trip to Wales for 2022 BUCS downhill).
- Projects: Designed and prototyped a bike lock scheme (using human centred design) which attaches to existing bike racks and allows users to lock their bike anywhere in a city. Achieved 2nd place in a team RC car race which had rules limiting the hardware. Developed and 3D printed new wheels which gave the device a large advantage.

King Edwards VI school

Southampton, United Kingdom

A-Levels: Mathematics (A), Physics(A), Design Technology (A*)*

Sept 2014 – July 2021

- Received the Whittington travel award for doing charity-based travel during gap year. The award helped to fund the Poles of Inconvenience rally (formally Mongol Rally) where a friend and I raised £2,000 for charity. Returned in 2022 to give a talk to Sixth form students about the trip as well as how to plan a gap year.

PROFESSIONAL EXPERIENCE

Tectonics LTD

Alresford, United Kingdom

CNC technician and assembly worker

July- August 2023

- Worked within the Aluminium department producing large aluminium components for portable structures.
- Learned how to setup and operate a 12m bed CNC machine, understanding the importance for tolerance control and orientation of lengths to avoid measurement issues over large distances.
- Developed an understanding for the workflow and supply chains involved with a high-paced and interdisciplinary manufacturing company.

Neilson Holidays

Greece, Fuerteventura

Bike Guide, Cycle Route Designer, Bike Mechanic.

Summer 2022, 2023

- Designed both road and mountain bike routes for a new resort. Included in depth-map analysis and communication with local guides.
- Developed in depth risk assessments for each route, including areas of concern. Made plans for evacuation routes and set up the accident reporting system in the resort.
- Serviced over 120 bikes as they were taken out of storage for the start of season and put together a fleet of bikes to be sold to local people from the surplus.

Parajet International LTD

Salisbury, United Kingdom

Week long work experience shadowing Design Team

November 2020

- Worked to develop a new bracket for holding the throttle of a paramotor. The design was a mix of user interaction along with technical parameters. Developed the component in SolidWorks before FDM 3D printing the part and making multiple iterations.
- Created an Arduino driven actuator to control the throttle of a test rig paramotor. Taking input RPM measurements and adjusting the throttle to match a desired input RPM.
- Went through basic training and was involved in testing sessions of the paramotor. This helped to understand the interface of the device and locate possible future improvements.

EXTRACURRICULAR ACTIVITIES

- **Adventure:** Completed the 2022 Poles of Inconvenience rally, driving a 1 litre car a total of 6,000 miles to Norway, Georgia and back. I developed a comprehensive knowledge of car engines, suspension systems and braking as I modified the car for the rally. I intend to do more adventures in the car in the future.
- **Mountain Biking:** Raced Enduro mountain biking across Europe, achieving many podium and top 10 results in the UK. Volunteered for the Enduro World Series races in Switzerland (2020 and 2021) where I became involved with the organisation and logistics of the events. My love for mountain bikes sparked my interest in engineering.
- **Sailing:** Compete in team racing events for Imperial College, maintaining training 12 hours a week alongside studies.
- **DIY and Interior Design:** Designed and built furniture for my university room in order to maximise a small space. This included a handmade desk, a custom clothes rail integrated with a shelf and a 3D printed lamp with varying light focus.

SKILLS AND INTERESTS

- **Technical:** Fusion 360, Solidworks, FDM 3D printing (I own a 3D printer), Stereolithography 3D printing, Rapid Prototyping, Full Stack Website development, Ideation and Rapid idea generation, Python, Adobe Suite (InDesign, Illustrator, Photoshop), CES Edupack, SPSS, Bela Board, Arduino.
- **Other Interests:** Rock climbing, skiing, music, current affairs and international relations.