

# Calum Powell

Mobile: +44 7881 383 216 | Email: calumpowell1402@icloud.com | LinkedIn: www.linkedin.com/in/calumagpowell

## EDUCATION

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### University of Bristol

**Bristol, UK**

- **MEng 2<sup>nd</sup> year Mechanical Engineering with Industrial Placement (Hons)** *Sep 2023 - Jul 2028 (Expected)*
  - Grade (Current): **First Class, 74%**
  - Awarded **fastest creation award** in first year design and manufacture project.
  - Relevant coursework:
    - **Materials Engineering (2<sup>nd</sup> year):** Composite design and techniques, stress and strain, yield criteria.
    - **Engineering Mathematics (1<sup>st</sup>/2<sup>nd</sup> year):** Mathematics applied to engineering problems, vector calculus, applied statistics, linear systems and partial differential equations.
    - **Engineering Practice (2<sup>nd</sup> year):** Design and manufacture, CAD modelling (Fusion 360), mathematical modelling and team management applied to several realistic engineering problems, including the drivetrain of a quadbike.
    - **Thermofluids (2<sup>nd</sup> year):** Hydraulics, compressible flows, mechanical energy conversion, sustainable energy systems, fuel cell thermodynamics, flow around 90-degree bends.

### Northampton School for Boys Northampton, UK

*Sep 2016 - Jul 2023*

- A-level: (A\*A\*A\*A\*) Mathematics, Physics, Chemistry and EPQ
  - GCSE: 11 (9s), including Mathematics (9) and English (9)

## PROFESSIONAL EXPERIENCE

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### Stable Fabrication

**Towcester, UK**

*Summer 2024*

- *Design and Manufacture, Work Experience*
  - Translated handmade engineering drawings from a 1990s car to CAD models (Fusion 360), which lead to praise from the director and the parts to be sent to manufacture.
  - Exposed to the manufacture and production of strict tolerance mechanical parts for racing cars, especially those used in chassis and suspension systems.
  - Created a program for a CMM to certify the quality of manufactured parts and discussed failures with machinists.

### Leonardo UK

**Luton, UK**

*Summer 2023*

- *Systems and Manufacture, Work Experience*
  - Improved soldering skills by creating and designing a PCB board for a proximity sensor.
  - Designed a basic antenna which was used to gain an understanding of their applications to everyday life.
  - Presented to an audience of employees a detailed summary of the skills I had gained throughout the experience.

### Helix Powertrain (Integral Powertrain)

**Milton Keynes, UK**

*Summer 2022*

- *Design and Manufacture, Work experience*
  - Introduced to the development and manufacture of high-performance electric motors.
  - Invited to use a test rig on a motor which was modified throughout the experience to carry out various tests.
  - Tested and built inverters for development and commercial use.
  - Taught the basics of CAD modelling using Catia to design brackets to be used with motors.
  - Following the testing I helped to report on the results of the tests using excel and filling out technical reports.

## EXTRACURRICULAR

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### Bristol Racing

**Society**

*Sep 2023 - Present*

- *Composites technical team leader*
  - Leader of a group of 10-20 members focused on designing and manufacturing composite parts.
  - Involves selecting appropriate materials; budgeting; making a bill of materials and creating manufacture process plans.
  - Worked at the National Composites Centre (NCC) to complete a resin infusion to manufacture a carbon fibre part.
  - Designed and manufactured a glass fibre tool to be used at the NCC.
  - Currently working on developing an upgraded lid for car currently competing in the Greenpower 24+ competition.

### Mens Rugby

**Society**

*Sep 2023 - Present*

- *Treasurer and vice-captain*
  - Current starter for Clifton Crusaders intramural rugby team at the university of Bristol.
  - Gained a dedicated work ethic and focus through consistently training within the team.

## ADDITIONAL INFORMATION

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- **DofE:** Achieved gold level award
- **Skills:** Arduino (Self-taught), Python (Learning), Autodesk Fusion 360
- **Badminton:** Competed at county level
- **Interests:** Golf, Rugby, Computer Programming, Motor Sport, Cooking, Woodworking