

► Alexander James Cavanagh

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Personal Profile

I am a dedicated and hard-working aspiring engineer, with a particular interest in aerodynamics. These attributes are reflected in my grades and demonstrate my exceptional work ethic.

Education

The University of Sheffield (September 2016 - June 2020)

MEng Mechanical Engineering (1st Class Honours)

Final Year Master's Project- 'A Numerical Investigation into the Impact of the Halo Device on Formula One Aerodynamics' (Awarded IMechE Best Project Certificate)

Hills Road Sixth Form College (September 2014 - July 2016):

A-levels- Mathematics (A*), Further Mathematics (B), Chemistry (A), Physics (B)

Other qualifications- AS-level Electronics (A), OCR Extended Project (B)

Swavesey Village College (September 2009 - July 2014):

12 GCSEs (A* - A), including English Language (A) and Mathematics (A*)

Other qualifications- CISCO IT (Distinction), FSMQ Mathematics (A)

Research Experience

A Numerical Investigation into the Impact of the Halo Device on Formula One Aerodynamics' (September 2019 - May 2020)

- Developed a CAD model of a Formula One halo device
- Conducted transient CFD simulations on a Formula One car geometry
- Identified an unsteady vortex structure originating from the halo device

Research Interests

- Unsteady Aerodynamics
- Fluid-structure interactions
- Vortex interactions
- Computational Fluid Dynamics
- Experimental methods

Achievements

Shell Eco Marathon: Redesigning the Outer Chassis (February - May 2019)

- Developed my Computational Fluid Dynamics skills by analysing proposed design solutions for a Shell Eco Marathon car
- Showed excellent organisational skills by managing the project timeline
- Consolidated my presentation skills by presenting the project findings to academics

Engineering: You're Hired (February 2018)

- Applied design skills to a professional project about commercial electric aircraft
- Displayed effective teamwork skills by engaging all group members as project leader

References - Available on request