Ryan Owens
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I am an Aerospace Engineering graduate looking to start my career in the Aerospace and Defence sector. A Graduate role would be a great opportunity to enhance and learn new skills to give me the platform to become a professional engineer in a specialised field. Ultimately, I aim to progress in my career becoming an incorporated engineer and later a chartered engineer.

Technical Skills

Data Analysis;
Data processing and investigation skills used to identify trends in experimental data sets.

Technical Writing;
Journal and long form scientific/engineering report writing.

Computer Software and Programming;
Extensive computer software experience across multiple disciplines, including:

- ANSYS (Computational fluid dynamics and structural mechanics finite element analysis)
- SOLIDWORKS (3D Engineering design)
- Merlin Flight Simulation (Building and testing aircraft flight models)
- MATLAB (Electrical Engineering Simulink and data processing)
- Microsoft Office
- JavaScript, HTML, CSS3, Bootstrap, React.js, Node.js, MongoDB, PHP, MySQL, Git, GitHub

Project Management;
Project planning, task delegation and risk management for engineering projects/case studies.

Education & Qualifications

The Developer Academy: January 2022 – Present

Learning software and web development through individual and group projects, creating a portfolio on GitHub.

- Portfolio Website
- Text Adventure Game
- Quiz Website

BEng (Hons) Aerospace Engineering, Sheffield Hallam University: *2015-2019*
Grade: Second Class Honours (2:2)
Modules covering;

- Aircraft Flight Mechanics
    - Performance evaluation of jet engines and basic rocket design.
- Thermofluids
    - Thermodynamic Processes and Heat transfer in lumped systems (conduction, natural and forced convection, and radiation).
- Aerospace Numerical Methods
    - Theory behind CFD, Finite Difference and Volume Methods, and how to use ANSYS Fluent for practical application.
- Control and Instrumentation
    - Transducers and signal conditioners, and system control using a PID Controller.
- Structural Mechanics and Integrity
    - Plastic-elastic deformation of solids and FEA practical application using ANSYS static structural.
- Computer Aided Design

    - Produce 3D models from engineering drawings, create mechanically functioning assemblies in SOLIDWORKS, and use SolidCAM to program the machining of parts.
- Engineering Mathematics
    - Engineering application of Vector Calculus, ODEs, Complex Numbers, and Newtonian Mechanics.
- Aircraft Design
    - Creating a preliminary design for a commercial jet from a given mission profile.

Dissertation Title: Numerical Analysis of Grid Fin Control Surfaces with Design Optimisation for Re-Usable Rockets (2:1)

1 I coalited the essential fundamentals and research to present a case for my paper.
    - How grid-fins differ from planar fins.
    - Why simpler theoretical flow modelling is insufficient for grid-fins.
    - The unit grid-fin method of reducing computational cost (elements needed for convergence).
2 Then I explained and validated my methodology.
    - How the use of periodicity boundary conditions creates a unit grid-fin.
    - Validation of my Spalart-Allmaras flow model for compressibility effects on a 2D flat plate.
    - Defining the dimension variables of the unit grid-fin for the optimisation study.
3 I Performed the 2D CFD study to optimize the internal surfaces of a grid-fin for expected rocket conditions.
    - Created a parametric design table to generate the meshes for each unit grid-fin.
    - Ran the model at varying AoA and Mach speeds to produce normal and axial force coefficients.
    - Processed the data to determine what shape produced the most aerodynamically efficient unit grin-fin.

Swinton Community School/Swinton Sixth Form College: *2007-2015*
A-Level: Mathematics - A, Physics – B, Chemistry - C, Further Mathematics - C
GCSE: 11 A*- C including English and Maths

Employment History

Industrial Sorter, Royal Mail, Doncaster: *July 2021 – October 2021*
Part-time contract work through Pertemps working in a parcel hub scanning and sorting tracked parcels for distribution.

Assembler, Kuehne+Nagel, Sheffield: *September 2020 – March 2021*
Contract work through Pertemps to work full-time in a logistics warehouse assembling and distributing PCR Covid tests.

Sales Advisor, Debenhams, Meadowhall: *December 2019 – January 2020*
4 weeks Christmas temporary role as part of the menswear team on a 30hr week contract.

Interests

Science and Engineering
I have attended talks/lectures and Careers fairs ran by engineering organisation (RAeS, IET & IMechE) to learn more about innovations within the industry and network with career professionals. Any topic that piques my interest I find satisfying researching to gain at least a basic understanding. My interests range from maths and science to history, but lately I've started learning JavaScript programming and enrolled in a software development course.

Sports
Football is one of my great passions, and I have played for both my school and my local team. Since I was a child, I've played on and off for various teams, sometimes as a goalkeeper. Playing team sports is not only fun, but it helps you develop soft skills like communication and teamwork and proves that no individual is above the team. It is my belief that sports is one of the best ways to develop your character and it relieves the stresses that come with life.