

# Nathanael Jenkins

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## Executive Summary

A mature, enthusiastic student of Aeronautical Engineering at Imperial College London with grades equivalent to first class honours. Experience leading teams to achieve goals from record-breaking rocket launches to record supermarket sales. Keen to develop a deeper understanding of the engineering industry through experiences in leading companies. This individual recognises the importance of practical experience in the workplace, particularly the impact of interpersonal skills when working in a larger team. Regular volunteering in the community provides an opportunity to encourage the next generation of engineers and scientists through competitions such as 'F1inSchools'. This is an organised individual, having achieved the highest possible A-Level grades whilst also producing a grade A\* extended project qualification and regularly attending RAeS lectures.

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## Experience

### **Undergraduate Research Opportunity | 'GPU Parallelisation of a 2D Navier-Stokes Solver'** 06/2021 - 08/2021

Imperial College London, Department of Aeronautics, Dr Sylvain Laizet (Supervisor)

- Successfully delivered a C++ solver using SYCL to enable accelerated computation on heterogeneous systems
- Developed an extensive understanding of high-performance heterogeneous computing, particularly GPU offloading
- Utilised industry-leading tools in the Intel oneAPI HPC Toolkit, including use of the VTune profiler for deeper offloading analysis

### **Aerodynamics and Simulations Engineer**

10/2020 -

Imperial College London Rocketry, Altitude Record Team

- Led the aerodynamics sub-team, using advanced computational methods to develop and test proposed rocket designs
- Demonstrated self-motivation by dedicating time to online fluid dynamics lectures to correctly apply 3D polyhedral meshing and compressible flow physics with real gas models in transonic and supersonic external flows
- Extended use of CFD beyond the scope of undergraduate studies, using StarCCM+ and SU2 on complex computational domains

### **Duty Manager**

03/2020 - 01/2021

The Food Warehouse, Basingstoke

- Promoted from general assistant to duty manager within 5 months, having played an integral role in the opening of this new wholesale-type store
- Confidently managed busy store periods, with total responsibility for store operations, safety and security

### **General Assistant**

10/2018 - 02/2020

The Mill House, Odiham

### **Work Experience Placements**

07/2017, 08/2018

NATS Southampton, AECOM Basingstoke, Miller Hare London

- Enhanced commercial awareness through experience in three engineering companies, each with unique goals and challenges

**Continued overleaf**

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## Education

### MEng Aeronautical Engineering (current)

2020 - 2024

Imperial College London

- Successfully completed first year studies achieving results equivalent to first class honours (81.43%)
- Awarded a position on the 1st year 'Dean's List' after attaining a grade in the top 10% of the cohort

### A-Levels (A\*, A\*, A\*, A\*)

2018 - 2020

Peter Symonds College, Winchester

- Produced a grade A\* extended project qualification (EPQ) investigating the feasibility of ion propulsion of spacecraft and aircraft
- Networked with subject experts at RAeS, QinetiQ and Purdue University whilst conducting Extended Project research
- Established time-management skills by maintaining a high standard of work whilst studying 4 A-Levels and an Extended Project

### 10 GCSEs, grades 7-9/A\*

2012 - 2018

Robert Mays School, Odiham

- Achieved grade 9 in seven subjects including Mathematics and Physics, and grade A\* in Engineering

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## Achievements and Memberships

### Member, British Human Powered Flying Club

2021 -

### Student Affiliate, Institute of Mechanical Engineers

2020 -

### IMechE James Clayton Undergraduate Scholar

2020 - 2024

### Student Affiliate, Royal Aeronautical Engineering Society

2018 -

### Arkwright Engineering Scholar

2018 - 2020

- Recognised as a future leader in engineering by the Southampton University Faculty of Engineering and Physical Sciences

### F1inSchools Alumnus, Judge, and Event Volunteer

2017 -

- Achieved 5th place at the 2017 World Finals in Kuala Lumpur, Malaysia, out of 51 global teams
- Inspire the next generation of engineers by mentoring current teams in engineering and professional skills
- Committed to judging at Regional and National Finals, since 2019
- Volunteered at 2020(21) World Finals, preparing teams from across the globe for live-streamed interviews

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## Software and Tools



Fusion360



SolidWorks



MATLAB



Khronos SYCL



StarCCM+



C++



oneAPI

References available upon request