

# Nathanael Jenkins

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## Executive Summary

An Aeronautical Engineering student at Imperial College London and scholar of the Institution of Mechanical Engineers with grades equivalent to first class honours. Pursuing a career in the engineering industry, with a particular interest in simulation and modelling.

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## Education

### MEng Aeronautical Engineering (current)

2020 - 2024

Imperial College London

- Achieved first and second year results equivalent to first class honours (81.43% and 78.13% respectively)
- Awarded a position on the 1st and 2nd year 'Dean's Lists' for attaining a grade in the top 10% of the cohort
- Recognised as an 'Aeronautics Scholar' due to exceptional first and second year achievements

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

2018 - 2020

Peter Symonds College, Winchester

- Produced a grade A\* extended project qualification investigating ion propulsion of spacecraft and aircraft
- Networked with experts at RAeS, QinetiQ and Purdue University whilst conducting Extended Project research

### 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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## Experience

### Summer Intern, Simulation & Modelling

06/2022 - 08/2022

MBDA Missile Systems, Stevenage

- Contributed meaningfully to high-fidelity dynamic models on two tactical strike programmes
- Improved understanding of industry source control and team management processes
- Understood the complexities of integration in a simulation and modelling context, recognising the importance of clear, continuous, and transparent communication between stakeholders

### 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 a basic 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 and simulations sub-team, using advanced computational methods to develop and test record-breaking rocket designs

- Improved design strategies to limit the negative impact of financial and regulatory limitations, contributing to the successful design and manufacture of three rockets with a budget of only £500
- 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

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## Achievements and Memberships

### 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++



Simulink



Fortran

References available upon request