Nathanael Jenkins

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Education

MEng Aeronautical Engineering with a Year Abroad — 2020-2024

Imperial College London, Massachusetts Institute of Technology (final year), Harvard University (cross-registered)

- Achieving results equivalent to 1st class honours (77% or 4.0 GPA), consistently in the top 10% of cohort
- Developing a numerical model for aircraft lightning strikes in the MIT Aerospace Plasma Group
- Sponsored by the Institution of Mechanical Engineers (IMechE) 'James Clayton' Undergraduate Scholarship

A-Levels in Maths, Further Maths, Physics, Product Design (A*, A*, A*, A*) — 2018-2020

Peter Symonds' College, Winchester

- Authored a grade A* extended project qualification on the future of ion propulsion for air and space transport

Experience

Summer Intern, Simulation & Modelling — 06/2022 - 08/2022

MBDA Missile Systems, Stevenage

- Independently completed two projects, produced documentation and presented in a departmental meeting
- Evaluated and implemented an alternative programming paradigm in a high-fidelity dynamic model
- Identified a solution to a long-term project which protected company IP while meeting client requirements
- Verified change sets, utilising more than 2000 core-hours on an industrial high-performance cluster

Undergraduate Research Opportunity — 06/2021 - 08/2021

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

- Completed and documented a research project in 'GPU parallelisation of a 2D Navier-Stokes solver'
- Implemented and profiled a novel C++ framework for high-performance heterogeneous computing
- Improved simulation run-time by up to 8x using GP-GPU offloading and more than 16x with FPGA acceleration
- Assessed the strategic value of the novel framework compared to mature parallelisation solutions

Lead Aerodynamics and Simulations Engineer — 10/2020 - 08/2023

Imperial College London Rocketry, Altitude Record Team

- Conducted computational fluid dynamics (CFD) studies on high-powered supersonic rockets using StarCCM+
- Negotiated sponsorship with ESTECO, acquiring licenses to modeFrontier optimisation software
- Integrated modeFrontier into engineering workflows, increasing rocket altitude by 3% and breaking a UK record
- Delivered a lecture introducing team members to basic CFD strategies and workflows

Duty Manager — 03/2020 - 01/2021

The Food Warehouse, Basingstoke

F1inSchools Alumnus, Judge, and Event Volunteer — 2017 - present

- Achieved 5th place at the 2017 World Finals in Kuala Lumpur, Malaysia, out of 51 global teams
- Mentor secondary school teams in engineering and professional skills
- Provide teams with access to academic research facilities, including wind tunnels at Imperial College London

References available upon request