

# Danial Nayyar

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## PROFILE

Dedicated final year MEng Mechanical Engineering student at the University of Greenwich, with a predicted first-class degree. Three years of work experience across multiple industries, demonstrating strong teamwork and communication skills, and the ability to convey technical insights effectively to diverse audiences. Skilled in mathematical modelling, fluid simulations in ANSYS, control systems in MATLAB, and predictive modelling using Python frameworks like PyTorch and Scikit-Learn.

## EDUCATION

MEng Mechanical Engineering, University of Greenwich Sep 2020 to Jun 2025

Key Modules: Numerical Methods in Mechanical Engineering, Dynamics of Engineering Systems, Thermo-Fluids, Design & Analysis of Avionic Systems

Final Year Project: Design and Construction of Footbridge to Connect Chatham Central with Rochester City Industrial Estate – Led the design and analysis of the opening mechanism of the swing bridge, incorporating CAD modelling and simulation techniques to evaluate and verify the design and calculations

Numerical Methods in Mechanical Engineering (Year 3) – Simulation of a three-dimensional flow through a curved geometry:

Simulated 3D fluid flowing through a curved pipe in ANSYS, visualised vortex flow, pressure surges and flowrate rate impacts on structural integrity, adjusted mesh densities to investigate solution accuracies.

Design & Analysis of Avionic Systems (Year 3) – Performance Analysis of a Helicopter's Mechanism Design:

Carried out mechanical analysis on a helicopter's inceptor system using MATLAB to assess load limits, safety margins, and natural frequency, confirming how resilient the system is under applied loads.

A-Levels | Kingsdale Foundation School

Sep 2018 to Jun 2020

Chemistry – A, Mathematics – B, Physics – B

## SKILLS

- Python – NumPy, Pandas, Scikit-Learn, PyTorch
- SQL
- C++ / Arduino
- MATLAB
- SolidWorks/ ANSYS
- Problem Solving
- Communication
- MS Office

## WORK EXPERIENCE

### Tutor | Aspire Learn

May 2024 to October 2024

- Taught the local community children GCSES Maths and Physics
- Personalised communication to ensure each student and their parents understood the tasks ensuring maximum progress.
- Ensured all markings were handed back in a timely manner

### Responsible Colleague | Argos

March 2023 to Present

- Advanced to role of Responsible colleague undertaking more responsibilities.
- Assumed managerial duties in absence of manager, gaining valuable experience in leadership
- Shadowed in interviews for new candidates applying for the General Manager and Sales Assistant role

### General Merchandise and Sales Assistant | Argos

Sep 2022 to March 2023

- Upsold key Argos Care services achieving monthly targets consistently
- Completed delivery tasks within the allotted timeframes consistently.

### Resident Assistant | University of Greenwich

Sep 2021 to Jun 2022

- Part of a team of four tasked with the general upkeep of the campus, ensured all complaints and calls were recorded and responded to them in a timely manner.
- Worked collaboratively to arrange events for residents during the academic year.
- Implemented a general upkeep of the campus when needed.

## Volunteering

### Research – Biomechanics of the Cornea | University of Greenwich

Aug 2024 to Present

- Initiated a research volunteering opportunity with Dr Osama Maklad to understand relationships between parameters affecting eye pressure during air puff test.
- Developing predictive model to accurately ascertain the pressure readings based on parameters such as IOP and CCT

## Certifications

- First Aid | British Red Cross (2021)
- Personal Safety Training | PCPA (2021)

## Professional Affiliations

- Student Member, IMechE

## Languages

English (Native)

Urdu (Native)

Arabic (Beginner)

## INTERESTS

- Deepening Knowledge in Physics: Use textbooks recommended by friends in the field.
- Focus on Mathematical Skills: I prioritise my mathematical skills to make sure I am prepared for advanced concepts and topics in engineering and physics.
- Sports: Swimming, Gym, Boxing