DHRUVA TEJA TURAGA | Curriculum Vitae

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GitHub • LinkedIn • Project Portfolio

Summary

Aeronautical Engineering student at Imperial College London with experience in avionics, embedded systems and data-driven simulation. Skilled in Python, C++, MATLAB and PCB electronics design with project experience ranging from rocket avionics and structural dynamics to robotics and VR-based structural analysis. Passionate about advancing space technology through multidisciplinary problem-solving and real-world engineering.
Explore my portfolio through the link above.

Education

BOURNE GRAMMAR SCHOOL
09/2016 - 06/2021
GCSE
Bourne, Lincolnshire
Grades: 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 7

BOURNE GRAMMAR SCHOOL
09/2021 - 06/2023
A-Level
Bourne, Lincolnshire
Grades: Mathematics A*,Computer Science A*, Physics A, Further Mathematics A, EPQ A*

IMPERIAL COLLEGE LONDON
10/2023 - Current
MEng Aeronautical Engineering
South Kensington, London
Subjects Mechanics, Materials, Mathematics, Structures, Thermodynamics, Aerodynamics, CNM, Turbomachinery, Mechatronics, Flight Dynamics

Experience

PYTHON DATA ANALYST
06/2022 - 07/2022
Compare the Market
Peterborough, UK

- Shadowed at Compare the Market, mastering Python-based **ADVANCED DATA ANALYSIS**.
- Collaborated with the data science team, gaining hands-on skills in **DATA CLEANING**, **MANIPULATION** and **VISUALISATION** with **PANDAS** and **MATPLOTLIB**.
- Applied statistical analysis and analytical models to real-world data, delivering actionable insights and optimising business operations.

STUDENTSHAPERS INTERN AND UG TEACHING ASSISTANT
07/2024 - 10/2024
Imperial College London
South Kensington, London

- Completed a Student Shapers internship at Imperial College London, mastering **C#** programming, **UNITY 3D GAME DEVELOPMENT** and the cutting-edge **VIRSE** framework.
- Collaborating with renowned professors on advanced virtual reality, focusing on the **DYNAMIC MODAL ANALYSIS OF FREE OSCILLATIONS** structures in beams and entire aircrafts.
- Applied innovative VR techniques to simulate and test **STRUCTURAL EFFECTIVENESS**, contributing to groundbreaking research in the field and curriculum at Imperial.

TECHNICAL FELLOW
06/2025 - Present
InXploratus Technologies
Kensington & Chelsea, London

- Contributed to the **ELECTRONICS TEAM** with hands-on involvement in **POWER DISTRIBUTION SYSTEMS**, **ACTUATOR CONTROL** and **SENSOR TELEMETRY** design for a next-generation autonomous underwater vehicles.
- Collaborated across **MECHANICAL** and **DATA VALIDATION** teams, assisting in **CAD DEVELOPMENT** of a new robotic prototype and conducting data-driven performance assessments.
- Developed early-stage **ML MODELS** aimed at automating telemetry interpretation and enhancing real-time **DATA RECONNAISSANCE** capabilities for experimental field trials.

Skills

Programming Language	**Experienced:** Python 3 | MATLAB | C++ | Kotlin | Java | SQL | LaTeX | C#
Frameworks & IDEs	Excel | Git | Raspbian | LINUX | Jupyter | Pycharm | Android Studio
Libraries	Matplotlib | Numpy | Pandas | Seaborn | Dash | Scikit-learn | PyTorch | SciPy
Design	SOLIDWORKS | Fusion360 | 3DExperience | Blender | Maya 3D-Animation | CircuitWizard | KiCAD | 3D Printing

Awards

Bronze, Silver & Gold Duke of Edinburgh
10/2019 - 10/2023

Bourne Grammar School — Yorkshire Dales

- Earned the Bronze, Silver, and Gold Duke of Edinburgh Awards, showing resilience and leadership through diverse outdoor and community-focused challenges.

Won CGCU Engineering Hackathon
05/2024 - 05/2024

Imperial College London — South Kensington, London

- Led the team to success when it came to thinking of an original idea to showcase a solution to an engineering problem with the Arduino components available.
- Demonstrated adeptness in both Arduino electronic design and computer science to develop a way for plants to communicate their feelings to allow them to tell us what is needed like water and nutrients with a selection of sensor components.

IBM Data Science Professional Certificate
10/2023

Coursera — Online

- Developed proficiency in **Pandas**, **Numpy**, **Matplotlib** and **Seaborn**, leveraging SQL expertise for advanced data handling and manipulation.
- Completed advanced projects on real-world data collection, analysis and predictive modeling using **scikit-learn** and other tools.
- Refined data visualisation skills by creating dashboards with **Dash** & **Plotly** and produced extensive reports in **Jupyter Notebook**, integrating SQL for complex data querying.

Technical Projects & Involvement

Badminton
10/2022 - Current

Extracurricular — England

- Coaching and participating in county badminton.

Imperial College London Rocketry
10/2023 - 07/2024

Imperial College London — South Kensington, London

- Key member of Imperial College London Rocketry Team's electronics division, skilled in advanced KiCAD circuit design, Git/GitKraken collaboration and CAD integration for optimal ground station and rocket placement.
- Enhanced team efficiency by improving project timelines and circuit integration success through hands-on troubleshooting and reliability enhancements.
- Used CAD to apply simulations and position components, enhancing rocket performance and reliability for high-altitude launches of immense accuracy.

Karman Space Program
08/2025 - Current

Imperial College London — South Kensington, London

- Applied embedded avionics design using microcontrollers and custom real-time software for robust guidance, navigation, control and data acquisition systems.
- Integrated and calibrated multiple flight sensors (IMUs, barometers, thermocouples) to feed real-time data streams for flight control and recovery initiation.
- Contributed to simulations, model analysis of prototype rockets and monitoring with data analysis of telemetry sensor data for efficient report writing and data communication.