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

IMPERIAL COLLEGE LONDON
10/2023 - Current

MEng Aeronautical Engineering — South Kensington, London

Subjects Mechanics, Materials, Mathematics, Structures, Thermodynamics, CNM, Aerodynamics, Turbomachinery, Mechatronics, Flight Dynamics

BOURNE GRAMMAR SCHOOL
09/2016 - 06/2023

Secondary Education — Bourne, Lincolnshire

A-Levels: Mathematics A*, Computer Science A*, Physics A, Further Mathematics A, EPQ
GCSEs: 11 x Grade 9, 1 x Grade 7

Experience

TECHNICAL FELLOW
06/2025 - Present

InXploratus Technologies — Kensington & Chelsea, London

- Led the **ELECTRONICS TEAM** to manage the design and implementation of **POWER DISTRIBUTION SYSTEMS**, **ACTUATOR CONTROL** and **SENSOR TELEMETRY** for next-generation autonomous underwater vehicles.
- Managed cross-disciplinary collaboration with **MECHANICAL** and **DATA VALIDATION** teams, driving **CAD DEVELOPMENT** of new robotic prototypes and performance assessments.
- Designed and developed early-stage **ML MODELS** to automate telemetry interpretation and enhance real-time **DATA RECONNAISSANCE** for experimental field trials.

STUDENTSHAPERS INTERN AND UG TEACHING ASSISTANT
07/2024 - 10/2024

Imperial College London — South Kensington, London

- Worked on advanced virtual reality applications for the **DYNAMIC MODAL ANALYSIS OF FREE OSCILLATION STRUCTURES**, from beams to entire aircraft.
- Mastered **C#** programming, **UNITY 3D GAME DEVELOPMENT** and the cutting-edge **VIRSE** framework through a Student Shapers internship.
- Developed and tested innovative VR techniques to simulate **STRUCTURAL EFFECTIVENESS**, contributing to Imperial's research and curriculum.

PYTHON DATA ANALYST
06/2022 - 07/2022

Compare the Market — Peterborough, UK

- Developed hands-on expertise in **DATA CLEANING**, **MANIPULATION** and **VISUALISATION** with **PANDAS** and **MATPLOTLIB**.
- Mastered Python-based **ADVANCED DATA ANALYSIS** while shadowing the Compare the Market data science team.
- Applied statistical models to real-world datasets, delivering actionable insights to optimise business operations.

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 | KiCAD | CircuitWizard | 3D Printing

Technical Projects & Involvement

KARMAN SPACE PROGRAM
08/2025 - Current

Imperial College London — South Kensington, London

- Designed and implemented **EMBEDDED AVIONICS SYSTEMS** using microcontrollers and **CUSTOM REAL-TIME SOFTWARE** for guidance, navigation, control and data acquisition.
- Led the integration and calibration of multiple **FLIGHT SENSORS** (IMUs, barometers, thermocouples) to deliver reliable real-time data for **FLIGHT CONTROL AND RECOVERY INITIATION**.
- Managed **SIMULATIONS, PROTOTYPE MODEL ANALYSIS AND TELEMETRY EVALUATION** workflows, producing actionable reports that drove engineering design decisions.

IMPERIAL COLLEGE LONDON ROCKETRY
10/2023 - 07/2024

Imperial College London — South Kensington, London

- Led the electronics division's circuit design using **KICAD** to implement circuits for both **ROCKET AVIONICS** and **GROUND STATION HARDWARE**.
- Managed collaboration workflows with **GIT/GITKRAKEN**, ensuring seamless integration across the electronics and airframe team.
- Developed **CAD-BASED SIMULATIONS** to optimise component placement and system reliability, directly improving launch performance and mission success.

BADMINTON
10/2022 - Current

Extracurricular — England

- Coaching and competing in doubles county badminton.

Awards

IBM DATA SCIENCE PROFESSIONAL CERTIFICATE
10/2024

Coursera — Online

- I developed proficiency in **PANDAS, NUMPY, MATPLOTLIB** and **SEABORN**, while leveraging **SQL** for advanced data handling.
- I completed projects on **REAL-WORLD DATA COLLECTION, ANALYSIS** and **PREDICTIVE MODELLING** using **SCIKIT-LEARN**.
- I designed **DASHBOARDS** with **DASH** & **PLOTLY**, and produced reports in **JUPYTER NOTEBOOK** integrating **SQL QUERIES**.

WON CGCU ENGINEERING HACKATHON
05/2024 - 05/2024

Imperial College London — South Kensington, London

- Led the Arduino team in **ONE OF EIGHT** competing groups, successfully **DESIGNING AND IMPLEMENTING** an original solution to an engineering problem.
- Developed an Arduino-based system enabling **PLANTS TO COMMUNICATE THEIR NEEDS** (water, nutrients) via a **NETWORK OF SENSORS**, combining **ELECTRONICS** and **SOFTWARE DESIGN**.

BEST IN ENGINEERING 6 CONSECUTIVE YEARS
05/2016 - 05/2022

Bourne Grammar School — Bourne, Lincolnshire

- Recognised as a **LEADER IN ENGINEERING** for six years showing constant **INNOVATION** and superior results in projects and solutions whilst improving the curriculum.