Joshua Logan Bostock

+44 (0)7843 887933
joshua.bostock@outlook.com
github.com/jbostock03
linkedin.com/in/joshuabostock

SUMMARY

Astrophysics undergraduate student at UCL with a projected First Class standing and research experience in observational and computational astronomy. Highly adaptable, with strong Python programming skills, cross-cultural academic experience in the UK and US, and a passion for data-driven problem solving. Seeking to apply analytical and collaborative strengths in scientific research or data science roles.

EDUCATION

University College London (UCL) — London, UK
MSci Astrophysics — *2022-2026 (Expected)*
- First- and second-year grade: First Class
- Modules include: **Practical Astrophysics & Computing**; **Astrophysical Processes**; **Astrobiology**; **Planetary Science**; Quantum Physics; Statistical Physics of Matter; Thermal Physics; Waves; Electricity & Magnetism; Classical Mechanics; Mathematical Methods I, II, & III; Developing Effective Communication

University of Washington — Seattle, Washington, USA
Study Abroad Programme — *2024-2025*
- GPA: 3.7 on 4.0 scale
- Courses include: **Astronomical Data Analysis**; **Astrostatistics & Machine Learning**; Exoplanets; High-Energy Astrophysics; Stellar Observations & Theory; Cosmology; Science of Climate; Pacific Indigenous Astrophysics
- Member of the Astronomy Undergraduate Engineering Group, maintaining Manastash Ridge Observatory

The Sixth Form College Farnborough — Farnborough, Hampshire, UK
A-levels – A in Physics, Chemistry, Maths & Further Maths* — *2020-2022*
- A* in Extended Project Qualification: Understanding the (im)possibility of Dyson Spheres
- Silver in Chemistry Olympiad

The Winston Churchill School — Woking, Surrey, UK
GCSEs – 9 at grade 9 including Maths & English; 4 at grades 6-8 — *2015-2020*

PROJECTS

Apparent Magnitude of Asteroid Didymos
- Performed photometric measurements using Python (Astropy, Matplotlib) on telescope images of the binary asteroid system Didymos
- Developed aperture photometry workflow in Jupyter Notebook, producing calibrated light curves and determining apparent magnitude in agreement with published data

Understanding Insolation on Earth
- Created an interactive Python-based tool to demonstrate insolation variation on Earth throughout the year, aimed at improving public understanding of climate systems
- Integrated Matplotlib and ipywidgets for dynamic educational visualisations and intuitive user interaction

Spectral Characterisation of Lunar Albedo
- Conducted spectral reflectance analysis of lunar simulant samples using lab-based spectrometry and custom Python fitting algorithms
- Collaborated in designing the experiment, collecting data, and applying non-linear regression techniques to evaluate material properties

WORK EXPERIENCE

Johnson Matthey — Online
Virtual Work Experience Programme — *July 2021*
- Engaged in sessions focusing on employability, decision-making, sustainability, and the automotive industry
- Led a group designing a net-zero house, justifying costs and features to current employees

Marmalade Game Studio — London, UK
Associate Producer — *July 2019*
- Facilitated in quality assurance by testing games and prototypes, giving valuable and constructive feedback working as a team
- Collaborated in meetings reviewing content and user interfaces for current and upcoming games

SKILLS

- **Programming & Data Analysis** – Proficient in Python (NumPy, Matplotlib, Astropy, pandas), Jupyter, and DS9; experienced in data visualisation, statistical modelling, and image processing
- **Scientific Communication** – Delivered technical presentations at UCL Observatory and authored formal reports on astronomical observations and lab analyses
- **Collaboration & Teamwork** – Contributed to multi-person research projects, such as observing proposals and outreach planning across UK and US institutions
- **Organisation** – Managed multiple academic and extracurricular commitments with consistent First Class performance
- **Technical Tools** – Familiar with LaTeX, GIMP, FITS file handling, Microsoft Office, and Google Workspace
- **Adaptability** – Successfully transitioned to a different academic system during Study Abroad at the University of Washington, excelling in advanced coursework

HOBBIES & INTERESTS

- **Hiking** – Enjoy exploring new landscapes through day hikes across the UK and abroad, developing resilience and appreciation for the natural world
- **International travel** – Passionate about cultural exchange and adapting to unfamiliar environments, which has enriched my global perspective during academic and personal journeys
- **Photography** – Keen amateur with a focus on astrophotography and long-exposure techniques; proficient in processing RAW and FITS files; featured on UCL's social media channels