



Joshua L. Bostock

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SUMMARY

Astrophysics undergraduate student at UCL with a projected First Class standing and 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 placement as part of competitive university-wide exchange

2024-2025

- GPA: 3.82 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; Geology of the Northwest
- 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

Understanding Insolation on Earth

UW – Apr-May 2025

- Developed a public-facing educational tool in Python, enabling users to visualise 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

UCL – Mar 2024

- 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

Apparent Magnitude of Asteroid Didymos

UCL – Feb-Mar 2024

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

WORK EXPERIENCE

Johnson Matthey

Online

Virtual Work Experience Programme

July 2021

- Participated in workshops on sustainability, innovation, and decision-making in the science and engineering sectors
- Led a cross-functional team to design a net-zero energy house, presenting solutions to a panel of company scientists and engineers
- Gained insight into the role of data-driven analysis in sustainable manufacturing and materials science

Marmalade Game Studio

London, UK

Associate Producer

July 2019

- Assisted in testing and evaluating gameplay mechanics and user interface designs across multiple platforms
- Logged and categorised bugs and feedback using internal tracking tools, contributing to quality assurance and product refinement
- Joined sprint planning meetings, learning agile development workflows and version control practices

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 L^AT_EX, 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