

# Max Dolan

London, United Kingdom

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## Personal Profile

Scientific Programming and Data Science Master's student looking to progress in the field of software engineering or data science using skills in both analytical problem solving, and an understanding of the process involved in tackling more abstract questions. Recently graduated with a Bachelor's of Science in Physics and Philosophy.

## Education

### University of Bristol

MSc in Scientific Programming and Data Science

Bristol, UK

Sep 2023 - Sep 2024

- Accepted onto the Google Developer Group mentor scheme
- Software Engineering and High Performance Computing for scientists – Gained an improved understanding of accelerated coding techniques, as well as the use of Cloud-native technologies
- Artificial Intelligence and Deep Learning – Foundation in Machine Learning techniques, and their practical implementation

### University of Bristol

BSc in Physics and Philosophy (2:1)

Bristol, UK

Sep 2020 - Jul 2023

- Awarded the Bristol plus prize, achieved by less than 5% of graduates
- Particle Detector for CERN's Experimental Areas – 78% - developed skills both in working with a team and also working with professionals within the field of research
- Essential Maths for Physics – 77% - Further improved knowledge in Linear Algebra, Bayesian Statistics and Multivariable Calculus

## Skills

<b>Languages</b>	Python (Pandas, PyTorch, NumPy, Scikit-learn. etc.), Bash, C++, LaTeX.
<b>Developer Tools</b>	Git, Docker, Google Cloud Platform, VS code, virtual machines
<b>ML Techniques</b>	K-Means/Gaussian Clustering, Decision Trees, Reinforcement Learning, Neural Networks.
<b>HPC and Cloud</b>	Parallelisation, Cython, Numba, Using Supercomputers.
<b>Soft Skills</b>	Peer Programming, Project Management, Data Wrangling/Communication, Mathematical Ability.

## Projects

### Updating the Pylj Python Package

University of Bristol

Bristol, UK

Apr 2024 - Oct 2024

- Converted entire package to be object-orientated and take advantage of Python classes.
- Implemented use of better visualisation techniques, in addition to improving GitHub checks.
- **Technical Skills:** Python (classes), Docker containers, Numba.
- **Soft Skills:** Peer programming, Project management, Self-teaching.

### California Forest-Fire Dashboard

University of Bristol

Bristol, UK

Oct 2023 - May 2024

- Located, formatted and cleaned multiple different forms of data, including HDF, netCDF4 and TIFF.
- Created online dashboard via Streamlit, finding ways to clearly yet accurately present massive amounts of information.
- By merging all data together, and a Machine Learning method, presented new ways of identifying at-risk areas.
- **Technical Skills:** Python(Xarray), Geo-Mapping, ML methods (Support Vector Machines, Random Forest etc.).
- **Soft Skills:** Peer Programming, Project Management, Data Wrangling, Data Representation.

## Particle Detector for CERN's Experimental Areas

CERN, University of Bristol

Bristol, UK

Oct 2022 - May 2023

- Worked directly with researchers at CERN to develop single-photon sensitive detectors for use in high-energy particle physics experiments in various beam lines.
- Maintained sufficient level of accuracy required for subatomic particle detection and produced an intensity monitor capable of giving over 3 billion readings per second, detecting energies at a photonic level.
- **Technical Skills:** Python(pymeasure), Modelling Software (AutoCAD).
- **Soft Skills:** Presentation Skills, Leadership, Teamwork, Project Management, Working with Clients.

## Work Experience

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### PineRock

Intern

New York, USA

Jul 2023 - Sep 2023

- Researched the use of AI within their field of brand communications
- Chaired a select committee of department heads to pitch ideas and gain feedback
- Presented findings and recommendations to the entire business, leading to implementation of key changes
- **Skills:** Teamwork, Communication, Presentation Skills, Working with Clients, Research

### University of Bristol

Student Advisory Group

Bristol, UK

Sep 2022 - Jul 2023

- Invited to join after having been elected a student course representative two years in a row
- Participated in various focus groups to help create solutions to problems affecting the entire student body, including transition from online to in-person exams
- Advised in the construction of £500 million Temple Quarter Campus, estimated to bring in £1.6 billion revenue annually
- **Skills:** Communication, Critical Thinking, Negotiation, Stakeholder Representation

### CHAOS (University of Bristol Physics Society)

Head of Promotion and Design

Bristol, UK

Jul 2022 - Jul 2023

- Was on the committee for one of the largest societies in the country
- Refocused society on building connections between students, and improving inclusivity
- Longlisted for the 2023 NSVA committee excellence award
- **Skills:** Teamwork, Graphical Communication, Creative Thinking, Community Building

### Various

Hospitality work

Bristol/London, UK

Jan 2018 - ongoing

- Have worked within catering, bars, kitchens and doing cleaning work
- Had to be adaptive and flexible under pressure, collaborating with a wide range of people in unfamiliar environments
- Acted proactively to independently organise and execute my duties every day
- **Skills:** Teamwork, Time Management, Fast-Learning, Customer Interaction, Practical Initiative

**References available upon request.**