Max Dolan

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Personal Profile

Scientific Computing with Data Science Master's student looking to progress in the field of data science using skills in both creative and computational problem solving, and experience in client communications and stakeholder management. Recently graduated with a Bachelor's of Science in Physics and Philosophy.

Education

University of Bristol
Bristol, UK

MSc in Scientific Computing with Data Science (Distinction)
Sep 2023 - Sep 2024

- Accepted onto the Google Developer Group mentor scheme
- Software Engineering and High Performance Computing for scientists – 83% - Gained an improved understanding of accelerated coding techniques, as well as the use of Cloud-native technologies
- Artificial Intelligence and Deep Learning – 74% - Foundation in Machine Learning techniques, and their practical implementation, including decision trees, reinforcement learning, and neural networks
- Quantum Information Theory – 75% - Built upon undergraduate quantum mechanics knowledge, combining with statistics to apply within computation

University of Bristol
Bristol, UK

BSc in Physics and Philosophy (2:1)
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

Languages	*proficient* - Python(Pandas, NumPy, Scikit-learn etc.), MySQL *beginner* - C++, LaTeX, bash
Developer Tools	Version Control (Git), Docker, VS code, Virtual Machines and Environments, Automated Testing
Soft Skills	Peer Programming, Stakeholder Management, Mathematical/Statistical knowledge

Projects

Updating the Pylj Atomistic Simulation Python Library
Bristol, UK

University of Bristol
Apr 2024 - ongoing

- Updating package for expansion by converting to be object-orientated
- Implementing GitHub actions for testing to ensure continuous integration
- **Technical Skills:** Python (classes), Docker containers, Numba
- **Soft Skills:** Peer programming, Project management, Self-teaching

California Forest-Fire Dashboard
Bristol, UK

University of Bristol
Oct 2023 - May 2024

- Researched new ways of predicting forest fires, with 60% accuracy, using Machine Learning methods
- Implemented data-processing pipeline, through the use of Xarray and geomapping, on multiple data file-formats
- Presented data with the creation of a Streamlit dashboard that conveyed it a in clear and engaging way
- **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
- Created prototype intensity-monitor, able to give over 3 billion readings a second
- **Technical Skills:** Python(pymeasure), Modelling Software (AutoCAD)
- **Soft Skills:** Presentation Skills, Leadership, Teamwork, Project Management, Stakeholder Management

Work Experience

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, Stakeholder Management, 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

- Refocused one of the largest societies in the country 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.