Bailey Walters

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Personal profile

As a final year Computer Science masters student who has completed a year in industry, I am looking to gain further experience and develop my skills. I have worked on a broad range of software development projects both individually and as part of diverse teams using languages ranging from Python to Java to C and industry standard tools and frameworks such as AWS, React, and PostgreSQL. I have experience presenting my work to a variety of audiences and love learning new skills, working in teams and solving complex problems.

Experience

September 2023 – September 2024	**Research Intern – Software Engineer –** Northrop Grumman • Worked in a diverse and remote team to develop a Home Security System-based interactive game for the Cheltenham Science Festival using a Raspberry Pi, AWS, computer vision and machine learning. • Represented the company and encouraged children to consider careers in STEM at the Cheltenham Science Festival. • Led the system design for an internal research project on geospatial data using AWS. • Presented my work and research to stakeholders from across the company. • Worked in a Scrum team, including temporarily taking on the role of Scrum Master.
January 2021 – July 2021	**Coding and Tech Tutor –** FunTech • Guided children between the ages of 7-16 through a range of technology courses. • Taught basic web browser skills, video editing, Python basics, 2D game development in Unity with C# and simple AI in Python such as Minimax. • Explained complex ideas and algorithms successfully to a variety of skill levels. • Worked remotely, adapting to various technical difficulties with Cisco Webex.
October 2018 – August 2020	**Volunteer Football Coach –** Linthorpe Academicals • Volunteered twice-weekly as lead training coach for a range of teams aged between 9-14. • Took on extra responsibility to cover for other coaches in the club as necessary. • Managed relationships with parents and players to ensure everyone enjoyed their time with the team and were able to develop as people. • During COVID, was responsible and accountable for sanitisation of equipment and the wellbeing and safety of all involved. • Achieved FA Coaching and First Aid Qualifications.

Education

October 2020 – June 2025	**MEng Computer Science with Intercalated Year** - University of Warwick • On track for a 1st class degree • 1st class dissertation – creating a tool for Automatic Recognition of British Sign Language using Recurrent Neural Networks. This involved tackling a number of problems around data acquisition, data quality and the lack of existing research. • Working on a Final Year Group Project – Real-Time Shot Assistance using Augmented Reality for Pool. Acting as project manager and computer vision lead, I am responsible for the ongoing success of this project.
September 2018 - June 2020	**A-Levels** - The King's Academy • A* in Maths, • A* in Computer Science, • A in Chemistry, • A in Further Maths AS-Level, • C in German AS-Level

September 2015 – July 2018	**GCSEs** - The King's Academy
	• Grade 9 in Maths, Computer Science, Combined Science (x2), History, RE
	• Grade 8 in German
	• Grade 7 in English Literature and English Language

Skills

Category	Proficiencies	Familiar With
Programming Languages	Python, Java, C#, Bash, JavaScript, HTML, CSS	C, MATLAB, Prolog, Haskell
Frameworks/Tools	PostgreSQL, Git, React, AWS, Unity, Spring, GeoServer, OpenStreetMaps, PMTiles, Jira, Confluence, LaTeX, REST, Linux Development	ASP.net, Docker, MATLAB/Simulink, SQLite, MongoDB, Vite, Slurm
Methodologies	Agile, Scrum, Kanban, Pair Programming	Waterfall, PRINCE2
Concepts	Object-Oriented Programming, Data Structures, Optimisation, Algorithm Design, Database Design, Test-Driven Development, Software Best Practices, Artificial Intelligence, Machine Learning, Data Analysis, Design Patterns	Legal, moral and ethical issues, Scalability, User Interface design, Hardware Design, High-Performance Computing, Security, Networking, Protocols
Soft Skills	Teamwork, Communication, Leadership, Organisation, Learning, Logical and Analytical Thinking, Problem Solving, Adaptability, Presenting, Research, Patience	

Additional Experience

May 2022 – July 2023, May 2024 – July 2025	**Executive Officer –** Warwick Pool Club
	• As both IT Officer and President, I have taken responsibility for the Club's online presence and day-to-day activities
	• Worked with the Student Union to ensure compliance with rules
	• Organised large-scale events both within the University and with other Universities
	• Negotiated and maintained sponsorships
	• Developed leadership, communication and organisational skills
October – November 2022	**Competitive Programming –** UKIEPC, NWERC, IMC Prosperity
	• Placed 2nd within the University, and within the top 50 in the UK at UKIEPC, qualifying for NWERC
	• Represented Warwick University at NWERC (Northwestern Europe Regional Contest) at Delft, Netherlands
	• Utilised effective communication and knowledge of algorithms to produce efficient solutions to complex problems under time pressure
	• Took part in IMC Prosperity, a trading simulation challenge to optimise profits
January 2021 – November 2022	**Mathematical Modelling for Electric Motorbike –** Warwick Moto
	• Helped design a simulation of an electric motorbike in MATLAB and Simulink
	• Worked on race-track extraction from satellite imagery using existing deep-learning models

References available on request