

Ryan Smith

Graduate Software Engineer | Machine Learning • Web Development • Ethical AI

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Profile

Software Engineering undergraduate specialising in machine learning, ethical AI, and web application development. Experienced in developing data-driven systems and collaborating on projects in both academic and industry settings. Seeking a graduate role to apply strong programming, analytical, and problem-solving skills to real-world software challenges.

Experience

Instructor (Part-Time) — *Code4Drones, UK*

Mar 2025 – Jul 2025

- Delivered engaging **STEM workshops** for students aged 9–16, introducing computer science and drone programming.
- Encouraged creative problem-solving through hands-on coding challenges.
- Achieved a **95% satisfaction rate** from students and faculty, demonstrating effective communication and instructional design.

Data Analyst Intern — *Urgo Medical*

Jul 2023 – Sep 2023

- Collected and analysed manufacturing data to produce key performance indicators (KPIs).
- Created **data visualisations and dashboards** to streamline reporting for senior management.
- Gained practical experience in **data interpretation, automation, and business process improvement**.

Technical Support Apprentice — *The Access Group*

Sep 2021 – Sep 2022

- Provided first-line technical support for **Access Care Planning** and **Webroster** within the healthcare sector.
 - Developed strong communication skills through issue diagnosis, ticket handling, and customer engagement.
 - Learned principles of **software troubleshooting, client support, and agile teamwork**.
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Education

BSc Software Engineering — *Swansea University*

Expected Graduation: Summer 2026

- Developing proficiency in **Java, Python, C, C++, C#, HTML, CSS, Haskell, Ada and SQL**.
- Core study areas include **Web Application Development, Critical Systems, Advanced Object-Oriented Programming (OOP), Game Development, Web Backend Engineering, and Software Concurrency**.

- **Dissertation:** *Developing a Machine Learning Model to Handle Ethical Scenarios in the CARLA Driving Simulator*
 - Designing and implementing ethical driving simulations using the **CARLA** open-source environment (Python-based).
 - Applying **reinforcement learning techniques** to model decision-making in challenging ethical driving situations.
 - Investigating ethical AI decision-making and autonomous vehicle safety.

A Levels — *Loughborough Grammar School (July 2021)*

- Applied Science – Distinction (A), Computer Science (B), Maths (C)

GCSEs — *Loughborough Grammar School (July 2019)*

- 8 GCSEs including Maths and Computer Science.
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Projects

Ethical AI in Driving Simulation — Swansea University (Dissertation Project)

- Developed a **Python-based simulation** using the **CARLA environment** to explore ethical decision-making in autonomous vehicles.
- Implemented **reinforcement learning models** to evaluate machine responses to ethical driving dilemmas.

2D Chips Challenge Game Prototype

- Replicated the classic game *Chips Challenge* as part of a group using Object-Oriented Programming (Java) with Agile processes.
- Updated and applied new features to another group's code while also fixing existing bug issues.

Personal Website

- Developed a personal website using self-taught HTML and CSS.
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Leadership & Activities

President — *Swansea University Anime and Manga Society*

Jul 2023 – Jul 2025

- Led society operations, doubling membership from 50 to 100 students.
- Shortlisted for *Society of the Year 2023/24* for fostering inclusive and well-organised events.

Cadet Flight Sergeant — *Royal Air Force Air Cadets*

Sep 2017 – Jul 2021

- Managed and trained over 60 cadets, organising weekly technical and leadership training programmes.
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Technical Skills

- **Languages:** Java, Python, C++, HTML, CSS, Haskell, SQL, C#, C++, Spark ADA, Laravel
- **Frameworks & Tools:** Git, Flask, Django, Unity, Visual Studio Code, IntelliJ IDEA, Linux, Excel (Data Analysis)
- **Practices:** Agile, Test-Driven Development, Version Control, Software Design Patterns, API Development, Data Visualisation, Reinforcement Learning, Teaching & Mentoring