

Soorya Selvakumar

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EDUCATION

Cardiff University

Sep 2025 – Present

MSc Advanced Computer Science

- Coursework: Programming Paradigms, Internet of Things: Systems Design, Principles of Machine Learning, Applications of Machine Learning: Natural Language Processing / Computer Vision, Developing Secure Systems and Applications, Distributed and Cloud Computing.

Cardiff Metropolitan University

Sep 2022 – Jun 2025

BSc (Hons) Computer Science – Artificial Intelligence

- Dissertation: Design and Development of an **AI-Driven System** for Virus Signature Detection Utilizing Machine Learning Techniques.
- Grade: **First Class Honours**

SKILLS

Programming: Python, Java, JavaScript, SQL, HTML/CSS.

Frameworks & Tools: React, Expo, AWS, Git/GitHub, scikit-learn, XGBoost, Jupyter Notebook, IntelliJ, PyCharm, VS Code

Concepts: Object Oriented Programming, Data Structures & Algorithms, Machine Learning, Feature Engineering, MVC Architecture, CRUD Operations.

Certifications: AWS Academy Cloud Foundations (2021), Great Learning: Python Fundamentals (2022), Great Learning: Introduction to AI (2023).

PROFESSIONAL EXPERIENCE

Minor League Cricket | Semi-Professional Cricket Player

Sep 2020 – Oct 2025

- Competed at a high-performance level representing **Dallas Mustangs** and **Kings XI Dallas**, strengthening collaboration and strategic thinking.
- Contributed to team match outcomes through consistent performance across multi-season competitive schedules in the Dallas region.

Cardiff Metropolitan University | Lead School Representative

Aug 2024 – Jun 2025

- Spearheaded student advocacy for **600+ peers**, collecting and analyzing structured feedback to drive academic policy improvements.
- Orchestrated targeted events and outreach programs, boosting student engagement and participation by **35%**.

Emergere Technologies | Data Analyst Intern

Jun 2020 – Aug 2020

- Engineered a robust data analysis framework that elevated team operational efficiency by **15%**.
- Delivered hands-on Python and data analysis training to **20+ individuals** across varied technical backgrounds.

PROJECTS

Shadow AI Guardian | Cardiff University

Feb 2026

- Engineered a **4-layer** AI threat detection Chrome Extension (URL blocking, DOM scanning, paste interception, network surveillance) **winning** the **Cardiff University Alacrity Hackathon**.
- Implemented real-time sensitive data detection across **6 data types** with a full admin portal, group management, and per-user audit logging using **JavaScript** and **Chrome Manifest V3**.

AI Malware Detection System | Cardiff Metropolitan University

Sep 2024 – May 2025

- Architected an ML-powered malware detection pipeline (**Random Forest, MLP, XGBoost**) achieving **0.9997 ROC AUC** across 2,000+ PE, Office, and PDF files, outperforming traditional signature-based antivirus tools.
- Executed end-to-end model engineering in **Python (scikit-learn, XGBoost)** covering static feature extraction, hyperparameter tuning, and cybersecurity threat evaluation.

ModernCity Smart City Application | Cardiff Metropolitan University

Sep 2024 – Jan 2025

- Developed a full-featured **Java/JavaFX** desktop application with modular **MVC architecture (Singleton, Factory patterns)** serving tourism, civic, and business use cases.
- Integrated a secure **MySQL** back-end with complete **CRUD** operations, exception handling, and unit testing ensuring production-grade reliability.

LEADERSHIP & ACTIVITIES

Cardiff Met Asian Society | Founder & President

Apr 2024 – Jun 2025

- Founded and scaled a university society, coordinating **10+ cultural events** and securing external business sponsorships to drive community growth and institutional visibility.
- Cultivated partnerships with local organizations and peer societies to foster an inclusive cross-cultural community of 50+ active members across campus.

Cardiff Met University Cricket Club | Performance Squad Player

Sep 2022 – Jun 2025

- Ranked among top bowlers club-wide (**35 wickets, 12.00 avg, 3.70 economy**), accounting for **24%** of team wickets and anchoring the attack at the **2025 BUCS Outdoor National Championship**.
- Sustained high-performance output across three seasons as a core First XI contributor, delivering match-winning performances in high-pressure competitive fixtures.

Cardiff Metropolitan University | Student Ambassador

Aug 2023 – Jun 2025

- Hosted campus tours and open days, serving as a primary point of contact for prospective students and their families to promote the university.
- Contributed to marketing and enrolment campaigns, assisting in the development of strategies that improved prospective student retention rates.