

SIDDHARTH BEJADI

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PROFILE

Final-year Computer Science student (predicted First Class Honours, 92% in Core Mathematics) who builds AI systems end to end — from model training and cloud pipelines to embedded deployment on constrained hardware. I have delivered software for an external client (Cambridge City Council), shipped a deployed multi-agent LLM application in a single day at a Clifford Chance hackathon, and I am founding an early-stage computer-vision SaaS venture. Comfortable across Python, C/C++, C# and cloud (AWS and Azure), and equally at home debugging down to the register or explaining a system to a non-technical stakeholder.

WORK EXPERIENCE

Edge AI Intern, ARU ARM AI Lab, Cambridge

Apr 2026 – Present

- Problem: three AI vision models needed to run on a single resource-limited MCU. Built and optimised a multi-model inference pipeline on a Cortex-M55 platform with a neural accelerator (embedded C/C++, PyTorch). Result: all three models running concurrently in real time within strict latency and memory budgets; validation methodology prepared for IEEE Embedded Systems Letters.
- Diagnosed complex hardware/software failures (flash addressing, cache coherency, runtime mismatches) down to register level, and turned them into a documented debug procedure adopted by the team.

Founder & CTO, Build Advance Create (self-employed)

Nov 2025 – Present

- Founding an early-stage SaaS venture: a cloud-connected computer-vision platform that analyses CCTV feeds for customer-selected events — fire, theft, injury detection — and automatically alerts the relevant emergency service.
- Leading product definition, technical architecture (cloud inference pipeline, per-feature detection models) and the subscription monetisation model.

AI/ML Research Assistant (Part-Time), Anglia Ruskin University, Cambridge

Dec 2025 – Present

- Problem: Cambridge City Council needed automated classification of urban waste streams. Designed, trained and evaluated CNN models on a custom dataset built from scratch — collection, cleaning, labelling and augmentation pipelines in Python. Result: a benchmarked classification system with accuracy, latency and hardware trade-offs quantified for deployment; findings presented to non-specialist stakeholders.

PROJECTS

Patient Behaviour Analysis & Posture Heatmap System — C#, Microsoft Azure

- Problem: clinicians needed to spot risky patient behaviour without manual video review. Built an end-to-end monitoring system in C# on Azure (ML Studio, Data Factory) to classify sitting postures from sensor data, with anomaly detection flagging behavioural spikes. Result: clinician-facing heatmaps and automated reports surfacing risk patterns over time.

Multi-Agent LLM Application — “Hack the Law” Hackathon (Clifford Chance)

- Problem: legal teams needed faster document analysis. Built a multi-agent LLM system (Python, Streamlit, NVIDIA Nemotron) where a supervisor agent decomposes tasks, routes to specialist agents and aggregates reviewed output. Result: a fully deployed, working application delivered in one day in a domain I had no prior knowledge of. Live: hackthelawteamsauron.streamlit.app

On-Device Object Detection — Edge AI Deployment (Python, YOLOv5, RKNN)

- Problem: real-time detection without cloud latency or cost. Trained and quantised (INT8) a YOLOv5 model and deployed it to a LuckFox Pico RV1106 (256 MB RAM, RISC-V, 1-TOPS NPU). Result: sub-30 ms on-device inference with all processing local — zero cloud dependency; profiled under sustained load (RAM 37 MB, CPU 65–68%, thermal ceiling 54.7 °C).

19-DOF Humanoid Robot — Full-Stack Build

- Designing and building a humanoid robot end to end: 6 V high-current power architecture, i²C servo control across 19 actuators, firmware, and on-board vision and inference — managed independently from concept to hardware.

Bare-Metal Peripheral Drivers — Arm Cortex-M4 (C)

- Register-level drivers written from the datasheet up, bypassing the vendor HAL, with a systematic timing-analysis methodology documenting memory-mapped I/O behaviour.

TECHNICAL SKILLS

- **Languages:** Python, C, C++, C#, Java, JavaScript, SQL.
- **AI/ML:** PyTorch, TensorFlow/Keras, scikit-learn, OpenCV, YOLO, NumPy, Pandas, Jupyter, RKNN Toolkit; CNNs and computer vision, LLMs and multi-agent systems, model quantisation (INT8), training pipelines, deployment and monitoring.

- **Cloud:** AWS (Cloud Computing Foundations — certified); Microsoft Azure (ML Studio, Data Factory, Blob Storage, Cognitive Services).
- **Web & Backend:** Django, Django REST Framework, .NET, REST API design and integration.
- **Systems & Networking:** Arm Cortex-M and RISC-V, embedded/real-time development, Linux (Ubuntu, Red Hat, openSUSE), Bash, Git and code review, TCP/IP, Cisco Packet Tracer.
- **Business tools:** Word, Excel, PowerPoint.

EDUCATION

BEng (Hons) Computer Science, Anglia Ruskin University, Cambridge

Jan 2024 – Jan 2027

- Predicted First Class Honours. Core Mathematics for Computing: 92%; Network Routing: 83%; Introduction to Programming: 80%. Also: Algorithm Analysis & Data Structures, Operating Systems, Embedded Computing, Computer Graphics, Digital Security.
- International Excellence Scholarship (£4,000, merit-based).

CERTIFICATIONS

- AWS — Cloud Computing Foundations. Harvard University — CS50: Introduction to Artificial Intelligence with Python. IIT Bombay (NPTEL) — Demystifying Networking.

HOBBIES & INTERESTS

- Building a 19-DOF humanoid robot — electronics, firmware and computer vision. Tennis and volleyball; chess. Former President of The Engineer's Guild and student mentor at Gravity Zero, coaching students and explaining technical ideas to mixed-ability audiences.