Liam Cracknell

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Education

University of Surrey Graduation: June 2027
BSc (Hons) Computer Science | Final Year *Guildford*

- **UKESF Scholar** (UK Electronics Skills Foundation), sponsored by ZF Group
- Predicted: 1st
- Relevant Modules: Computational Intelligence, Robotics, Information Security Management

> *[WIP, Final Year Project]* **Manipulation Between LLM Agents in Monopoly**
> - Designing a Monopoly negotiation benchmark to measure LLM manipulation, persuasion vulnerability and defences.
> - LLM evaluation harness across local open-weight and frontier API models, measuring how manipulation scales with capability.
> - Monte Carlo rollout scoring for trade harm with automated claim checking against true game state.

Barton Peveril Sixth Form College 2021 – 2023
A Levels *Eastleigh*

- Computer Science, Mathematics, Further Mathematics, Psychology

Experience

ZF Group Sept 2025 – 2026 (12 months)
Student Engineer, Cyber Security Team | Industrial Placement Year *Birmingham*

Worked on internal tooling and risk report generation alongside year-long student project.

- Developed 'PyDownloader', a Python tool for flashing bootloaders to steering and braking ECUs over CAN using UDS (ISO 14229), through to first release on the test rigs on site.
- Added UDS support for Vector and PCAN adapters, and JSON config handling with schema validation.
- Wrote BDD tests (Gherkin, pytest), and reviewed pull requests from others.
- Extended a tool automating ISO 21434 Residual Risk Reports to score risk directly from TARA models.
- Guided site tours for a Department for Business and Trade trade mission of 18 UK companies.

> **High Throughput DataLogger** | Project Management, Python (PyQt6), C
> - Worked with 3 other placement students across the 12 months on a data logging solution for condition monitoring and system development of ECUs.
> - Owned the PyQt6 desktop app with a multi-threaded streaming pipeline (background serial reader, thread-safe signal store, live plotting, A2L signal selection, CSV export) and a hardware-abstracted TCP socket mock logger sharing the real serial interface for UI testing.
> - Implemented C firmware on the intermediary board for state machine handling and mock data output.
> - Scoped the project with stakeholders across the site, creating 71 traceable requirements, flowcharts and Gantt tracking, then presented to managers and site leads with handover documentation.

Surrey Sports Park 2023 – 2024
Front of House Advisor *Guildford*

Supported members and visitors at reception, rapid learning and use of systems and on-the-spot problem solving.

Swim School Academy 2021 – 2023 + holidays 2024/25
Lifeguard *Southampton*

Watched over children's swimming lessons to help prevent accidents and provide first aid when needed. Responsible for the pool environment's upkeep and organisation, communication with parents, assisting teachers and safeguarding the children.

Technical Skills

Languages:	Python, Java, C
Frameworks + Libraries:	PyQt6, tkinter, PyTorch, CUDA, ROS2
Testing:	JUnit, pytest, TDD, Gherkin (BDD), valgrind
Tools:	Git, Linux, Azure DevOps + Pipelines, uv, moon, Mermaid, RViz, Gazebo
Automotive:	CAN, UDS (ISO 14229), ISO-TP, A2L, TARA / ISO 21434, Vector and PCAN interfaces

Other

Surrey Video Games Society 2025 – 2027
Overwatch Game Rep *University of Surrey*

Leading the Overwatch side of SVGS, ran trials and managing 3 teams of various skill levels competing in national university leagues (NSE, USS).