Christian Garry

MSc Scientific Computing | Probability · Statistics · Optimisation | C++/Python | Quantitative Methods

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Education

MSc Scientific Computing & Data Analysis (AI for Engineering) Durham, United Kingdom
Durham University Sep 2025 – Present

- **Modules:** Bayesian ML (Foundations/Unsupervised; Regression/Classification), Optimisation & Control for AI, Deep Learning for Engineering, HPC/GPU Programming, Performance & Vectorisation.

MEng Electronic Engineering Durham, United Kingdom
Durham University Sep 2020 – Jun 2024

Key Skills

Maths & Optimisation: Probability & statistics; Numerical methods; Convex/non-linear optimisation; Decision-making under uncertainty; Experimental design & fast iteration.
Systems & Performance: HPC/GPU; Simulation & automated testing; Networking (IEC 60870, DNP3).
Machine Learning: Bayesian inference; Regression & classification; Unsupervised learning (clustering, PCA); Deep learning for engineering; Model evaluation & calibration; robustness & traceability; RAG/LLM pipelines.
Programming: C++, Python, SQL, C, C#, MATLAB.

Experience

Graduate Communications Engineer Hebburn, United Kingdom
Siemens PLC Sep 2024 – Present

- Built latency-sensitive C/C++ stacks for industrial relays (TCP/IP, IEC 60870, DNP3).
- Designed Retrieval-Augmented Generation (RAG) pipeline (Python, Qdrant, LLM) with retrieval evaluation and end-to-end tracing/diagnostics; cut engineer time-to-answer by over 99%.

Industrial Tutor Durham, United Kingdom
Durham University, Department of Engineering Sep 2025 – Present

- Lead weekly design tutorials; mentor teams on scope, feasibility, Gantt planning, and design reviews.
- Mark feasibility and final submissions; deliver quantitative, structured feedback on clarity, rigour, and justification.
- Coach teams through feasibility-driven decision-making: surface assumptions and specifications, test them, and retire designs that fail cost, risk, or performance constraints.

Projects & Research

Alternative Digital Asset Markets Research Durham, United Kingdom
Independent Project Sep 2024 – Present

- Analysed liquidity, volatility, and arbitrage in alternative digital asset markets.
- Built index & risk models (Sharpe, Sortino) with execution-aware backtests (Python/C++).

Silicon Carbide JFET CPU Durham, United Kingdom
Master's Dissertation Oct 2023 – Apr 2024

- Built custom 4-bit CPU in LTspice from SiC JFETs for extreme temperature and radiation environments.
- Developed complete toolchain: C-like compiler (C++), assembler, and Python automation scripts.

Leadership, Activities & Interests

Leadership: Bishops Diocesan College Fencing Team Captain; Durham Fresher Representative (2022–23).
Activities: Durham University Fencing Team; Counter-Strike (team strategy); Boxing (Student Fight Night).
Interests: Market analysis projects (alternative digital assets); investing/trading strategy exploration; AI/software experiments; real estate and rental markets.
Achievements: Weldon le Huray Fencing Scholarship (2020–24); South Africa U17 Fencing Champion; President's Award (Gold).