

Dhruv Sharma

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EDUCATION

- **University of Cambridge** Cambridge, United Kingdom
MPhil in Scientific Computing Oct 2025 – Sep 2026
Awarded a merit-based scholarship covering full tuition by the Department of Physics.
Research focus on atomistic materials simulation, including parallel programming, machine learning methods, and advanced C++.
- **University College London (UCL)** London, United Kingdom
BSc Chemistry with Mathematics; Grade: First-Class Honours Sep 2022 - Jun 2025
Courses: Algorithms and Data Structures, Scientific Programming, Computational Chemistry, Mathematics for Physics and Astronomy
Activities and Societies: Quant Society, Asset Management Society, Scuba Diving Society, Surfing Society, Brazilian Jiu-Jitsu Society

EXPERIENCE

- **Cisco ThousandEyes** London, UK
Software Engineer Intern Jun 2025 – Sep 2025
 - Developed an advanced indoor navigation iOS app using ARKit and built an interactive heatmap with SwiftUI.
 - Developed a Wi-Fi heatmap feature from concept to identify network deadzones and guide optimal booster placement.
 - Feature prototype was presented to 1000+ employees at company-wide kickoff, earning recognition from leadership.
 - Engineered core logic with greedy and simulated annealing algorithms, and multithreading for background calculations.
 - Integrated C++ network tests to Android & iOS apps to measure service speeds from user devices through their router.
 - Worked with embedded (C++) and mobile (Kotlin/Swift) teams, fixing complex C++ and CMake build errors.
 - Built a cross-platform CMake/Bash pipeline to compile core C++ libs (OpenSSL, cURL) for Android & iOS.
- **Microsoft** Edinburgh, United Kingdom
Software Engineer Intern, Azure for Operators Jul 2024 - Sep 2024
 - Used Ceph, an open-source package to manage syncing data between voicemail servers scaling to millions of users.
 - Wrote robust, error-handled code to allow for an outage-less upgrade of servers for customers with five nines uptime.
 - Ensured code could easily be debugged with well-written documentation and logs for support teams to aid customers.
 - Deployed Linux VMs, automated processes with bash scripts, monitored and managed network services/APIs.
 - Gained skills in working with open source communities, debugging poorly documented functions in large codebases.
 - Replaced Ansible with Python scripts, boosting command speed by up to 1000x, enhancing support team efficiency.
 - Developed unit-tested Java code in a large codebase, managing endpoint selection for requests in a multithreaded server.
 - Developed a Microsoft 365 Copilot extension for researchers to accurately discover papers via the Semantic Scholar API.
- **Sainsbury Wellcome Centre and Gatsby Computational Neuroscience Unit** London, United Kingdom
Research Software Engineer, Neuroinformatics Unit Sep 2023 - Mar 2024
 - Helped develop Movement, an open-source Python package for the kinematic analysis of animal body movements.
 - Wrote high-quality, object-oriented, unit-tested code for the I/O of various data formats and underwent code reviews.
 - Utilized strong CI/CD practices to facilitate open-source collaboration and published the code for open-source use.
 - Published as a coauthor in the proceedings of Measuring Behavior 2024: <https://doi.org/10.6084/m9.figshare.25897855>.
- **S-Cube** Imperial College London
Software Developer Intern Jun 2023 - Aug 2023
 - Applied autodifferentiation to accurately compute gradients of various cost functions for gradient descent.
 - Utilized Fourier transforms with NumPy library to perform signal processing on seismic data.
 - Vectorised data while calculating the zero-lag cross-correlation of seismic data to improve compute time.
 - Automated data extraction from documents using Python with libraries Pandas, Itables and AWS CLI.
 - Leveraged fine-tuned GPT models and prompt engineering techniques to enable natural language data extraction.
 - Developed chatbots with LLMs, Flask and PostgreSQL, integrated intent detection for API data retrieval.
 - Deployed live web applications with AWS EC2, AWS ELB, Docker, Kubernetes, Nginx, and Git for version control.

ADDITIONAL INFORMATION

- **Coding Languages:** Python, C++, Kotlin, Swift, Java, Bash, SQL, R, C and L^AT_EX.
- **Interests:** Scuba Diving (PADI Certified Advanced Open Water Diver), Surfing, Brazilian Jiu-Jitsu, Cycling
- **Spring Weeks:** G-Research Coding Challenge (Winning Team), Susquehanna International Group, WTW, Schroders.