

ARYAN LOKESH

Graduate Software and AI Engineer

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PROFILE

MComp Computer Science with Artificial Intelligence graduate with experience across full-stack software engineering, applied AI/ML, mobile development, numerical computing and GPU programming. UK Graduate visa holder.

EDUCATION

MComp Computer Science with Artificial Intelligence, 2:1 | University of Sheffield | 2022-2026

Final-year average: 70.1%. Selected results: Parallel Computing with GPUs 79; Darwin Project 75; Speech Technology 74.

Cambridge International A Levels (June 2021): Information Technology A*, Mathematics A, Chemistry B and Physics B; English Language B (AS Level).

TECHNICAL SKILLS

Languages: Python, C/C++, Kotlin, Ruby, SQL | **Frameworks/Tools:** PyTorch, Ruby on Rails, PostgreSQL, CUDA/OpenMP, Jetpack Compose, Git, Linux

SELECTED UNIVERSITY PROJECTS

Productiv - Full-Stack Productivity Platform | 2025-2026

Ruby on Rails 8, PostgreSQL | Team Software Engineering Project

- Built a Rails/PostgreSQL productivity platform as a team, spanning personal/shared tasks, Pomodoro, notifications, team projects, gamification, analytics, administration and AI-assisted task breakdown.
- Our team used Kanban, Gantt/risk planning, story mapping, meetings, retrospectives, coding standards, customer interviews/personas, iterative UX testing and GitLab feature-branch/merge-request integration.
- Quality engineering combined RSpec/Capybara/Selenium testing, performance regression checks, database-query analysis and CI gates for testing, security and linting.

ReCoLA - Android Property Management Application | 2025

Kotlin, Jetpack Compose, Room, Google Maps | Six-Person Team Project

- Built a property-management Android app in a six-person team, covering properties, tenants, recurring bills, suppliers and maintenance through Room-backed persistence and Jetpack Compose.
- Our team used user stories, paper/digital prototyping, design-option analysis, shared task planning, Git integration and end-to-end acceptance testing.
- The app included property CRUD, maps/geocoding and proximity sorting alongside tenant, billing, supplier and maintenance workflows.

TB-Turing - Audio-Based Tuberculosis Screening Research | 2025-2026

Python, PyTorch, Google HeAR, Wav2Vec2, HPC | Team Research Project

- Investigated cough- and respiratory-audio approaches to TB screening, comparing pretrained HeAR and Wav2Vec2 representations with patient-level machine-learning models.
- Evaluated models with patient-disjoint cross-validation and symptom/demographic information; the best symptom-assisted model achieved 0.83 AUROC in internal patient-level validation.

Parallel Computing with CUDA and OpenMP | 2026

C/C++, CUDA, OpenMP, Nsight | Individual Coursework

- Implemented and compared serial, OpenMP and CUDA versions of pattern-matching, histogram and image-processing workloads.
- Optimised and profiled GPU implementations with Nsight, achieving up to ~239× speed-up over the serial CPU implementation on the largest pattern-matching workload.

Options Pricing and Calibration | 2024-2025

Python, NumPy/CuPy, PyTorch, SciPy | Individual Dissertation Project

- Built an end-to-end options pricing and calibration pipeline for the Heston stochastic-volatility model, filtering SPX market data and estimating model parameters with COS pricing and bounded L-BFGS-B optimisation.
- Implemented NumPy CPU and batched CuPy/CUDA GPU pricing, then trained a PyTorch neural surrogate to approximate option prices and accelerate repeated pricing during calibration, analysing the trade-off between runtime and pricing accuracy.

Speech Technology - Voice Activity Detection and Statistical Speech Modelling | 2026

Python, scikit-learn, sequence models | Individual Coursework

- Developed and compared neural models for voice-activity detection, evaluating performance across different speech datasets.
- Built statistical models for vowel classification and speaker identification, comparing model configurations and utterance-level decision methods.