

Edmund Goodman

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EDUCATION

University of Cambridge <i>Advanced Computer Science MPhil</i>	Oct. 2024 – Jun. 2025 Cambridge, UK
University of Warwick <i>Computer Science BSc (Hons) with intercalated year; First Class Honours</i>	Sept. 2020 – Jun. 2024 Coventry & St Albans, UK
The Perse Sixth Form <i>Academic scholarship; A-levels in Maths, Further Maths, Physics & Computer Science</i>	Sept. 2018 – Jun. 2020 Cambridge, UK

EMPLOYMENT

Apple Inc. CAD Design Verification Intern • Summer internship at the UK Design Centre for Apple Silicon. • Built software tools and infrastructure for the design and design verification of hardware.	Jun. 2024 – Sept. 2024
Apple Inc. CAD Design Verification Industrial Placement • Intercalated year in industry at the UK Design Centre for Apple Silicon. • Built software tools and infrastructure for the design and design verification of hardware.	Jul. 2022 – Jun. 2023
HUBER+SUHNER Polatis Software Engineering Intern • Performed a major version bump of Python for fibre-optic switch test harnesses. • Refactored the VBA backend of a corporate planning Excel spreadsheet.	Jul. 2020 – Sept. 2020

EXPERIENCE

University of Warwick Computing Society Academic Coordinator • Organised and delivered technical talks, introductory workshops, and revision sessions – including git Good , CS260 algorithms , and award-winning talk The Mathematics of Lasagne .	Sept. 2023 – Jun. 2024
University of Warwick iGEM team iGEM Team Member • Led software for the international gold medal winning Warwick team for the iGEM synthetic biology competition. • Architected and implemented a stochastic model of the spread of antibiotic resistant pathogens which was nominated for best model (2021.igem.org/Team:Warwick/Model), and created the wiki website showcasing the team's work.	Feb. 2021 – Sept. 2021

PROJECTS

Bachelor's Thesis • Wrote a dissertation titled “Assessing the suitability of Rust for performant and productive implementations of HPC codebases”, achieving a High First Class grade of 87%. • Built HPC MultiBench “A tool to run, aggregate, and analyse metrics about HPC batch compute jobs via Slurm from a YAML format”, and used it to run performance experiments on a HPC mini-app translated from C++ to Rust. • Presented a short-format talk derived from the dissertation as part of the P3HPC workshop .	Sept. 2023 – Apr. 2024
MiniC Compiler • Implemented an LLVM-backed compiler in C++ for a subset of the C language, achieving 98% – the highest mark in the cohort. Transformed provided grammar to $LL(k)$, hand-crafted recursive descent parser into custom AST data structure, and code-generated into LLVM IR with a focus on both correctness and ergonomic error messages. • Created open-source extension to provided testing infrastructure, including a novel approach to test error messages.	Sept. 2023 – Dec. 2023

TECHNICAL SKILLS

Languages : Python, Rust, Kotlin, Bash/Zsh, SQL, Java, C, C++, Haskell, Matlab, HTML & CSS, TypeScript, Prolog
Technologies : Git, Kubernetes, Docker, TeamCity, GitLab CI, GNU Make, Cadence vManager, Cadence Indago, React, OpenMP, MPI, Slurm, Apache Hive, Apache HBase, LLVM, PostgreSQL, Rocky Linux, EndeavourOS, Qt, Textual, Ruff, MyPy, FastAPI, Pydantic, L^AT_EX, Markdown
Project Management : Agile, Kanban, Scrumban, Jira, Confluence, GitLab issues