Sam Turner

sam@stmio.net | github.com/stmio | linkedin.com/in/stmio | stmio.net

EDUCATION

University of Warwick Sept 2024 — July 2027
Bachelor of Science in Computer Science *Coventry, UK*

- Predicted a First Class result following a 1st Year average of 84.4%, with a First Class grade in all modules individually
- Relevant Modules: Programming for Computer Scientists, Design of Information Structures, Mathematics for Computer Scientists I/II, Computer Organisation and Architecture, Functional Programming and Computer Security

Finham Park II Secondary School Sept 2017 — June 2024
4 A*s at A-level in Mathematics, Further Mathematics, Computer Science and Physics *Coventry, UK*

TECHNICAL SKILLS

- **Programming Languages**: Python, C/C++, Haskell, Java, Rust, C#, Bash, TypeScript, Lua, SQL, HTML/CSS
- **Technologies**: PyTorch, Tensorflow, NumPy, Gymnasium, PufferLib, pandas, cudf, Matplotlib, raylib, Astro, Node
- **Developer Tools**: Git, GitHub, UNIX utilities, Weights and Biases, Docker, Jupyter, NeoVim, LaTeX

EXPERIENCE

Research Intern (Artificial Intelligence and Machine Learning) Jun 2025 — Present
Department of Computer Science, University of Warwick *Coventry, UK*

- Developing and verifying Reinforcement Learning robustness techniques for Group Relative Policy Optimisation
- Exploring the usage of Preference-based Reinforcement Learning to online policy optimisation algorithms
- Testing applications of our research, including to the fine-tuning of LLMs to improve performance in reasoning tasks

Contributor and Researcher May 2025 — Present
PufferAI *Remote*

- Contributing to PufferAI's ML library, which received an RLC Best Paper Award and 3,000+ stars on GitHub
- Developed a high-performance RL drone flight simulator in C, which trains at 5M+ steps/sec on an RTX 5090
- Supported the developer community in creating new simulators by maintaining the "gold standard" example codebase
- Funded to research the sim-to-real usage of RL drones, including custom radio firmware in C and domain randomisation

Vice President Mar 2025 — Present
Warwick Artificial Intelligence Society *Coventry, UK*

- Leading a team of volunteer students to deliver academic events and AI projects for our cross-faculty members
- Developed a new society website in Astro and TypeScript which allows us to run dynamic competition leaderboards
- Implemented GitHub authentication for automatic leaderboard updates via webhooks and CI after code updates
- Presented a LiDAR-based AI navigation system at the annual Warwick AI Summit, winning best student project

Lead Organiser, Logistics and Outreach Mar 2025 — Present
The Warwick Hackathon (WHACK) *Coventry, UK*

- Liaised with leading tech companies to secure £5,000 of sponsorship, allowing 300+ students nationwide to attend
- Engaged with university stakeholders to ensure that the event's logistics, such as venues and power, are suitable

Open Source Contributor Sep 2023
NVIDIA (the RAPIDS AI project) *Remote*

- Developed a new feature for NVIDIA's GPU-accelerated dataframe library downloaded by over 500,000 developers
- Proactive in ensuring all edge cases are covered and exhaustive unit tests are added to improve maintainability

Software Engineering Placement Jul 2023
Rolls-Royce *Solihull, UK*

- Built a coherent system in Python to interface a calculation program and database for analysis of safety-critical bolts
- Improved workflow for engineers completing a structural safety assessment as part of the certification for jet engines

PROJECTS

Knox Password Manager (github.com/stmio/knox) May 2023 — Apr 2024

- Developed a sophisticated full-stack web application using Node and Express which served a REST API
- Implemented industry-standard authentication and key exchange protocols including SRP and HMAC signing
- Documented the design and implementation of complex algorithms through a detailed technical report
- Ensured the security of user data in the database and Redis cache with tested encryption algorithms such as RSA