Wyson Cheng

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Education

University of Edinburgh — Edinburgh, UK
Master of Science in Cyber Security, Privacy and Trust — 2025
Graduated with Merit

University of Nottingham — Nottingham, UK
Bachelor of Science in Computer Science — 2024
Graduated with Merit

Experience

Intern - Deloitte — Taipei, Taiwan — Jul. 2023 - Sep. 2023

- Engaged in a dynamic internship focusing on **software development** and **agile management**.
- **API Development and Maintenance**: Developed and maintained APIs using MuleSoft. Managed tasks and deadlines efficiently using JIRA. Addressed evolving client requirements and change requests, maintaining high-quality solutions.
- **Testing and Debugging**: Collaborated with team members to replicate client-identified bugs and diagnose possible solutions. In charge of communicating with the development team.
- **UI Design and Adaptability**: Created new UI designs in response to client requirements and developed reusable templates. Enhanced design efficiency and project scalability.

Projects

Home Lab (Individual Project) — Jan. 2025 - Present

- Built a **cluster** on three Raspberry Pi 5 devices, leveraging **K3s** for lightweight **Kubernetes** orchestration.
- Employed **Ansible** to provision and configure the cluster and used **Kustomize** for environment-specific configurations.
- Implemented **Flux** for **GitOps** continuous delivery, ensuring seamless rollouts and version control across the entire setup.
- Deployed **Longhorn** for container-native distributed storage, integrated **CloudNativePG** for a robust PostgreSQL operator in Kubernetes, and configured **Traefik** as the Ingress Controller.
- Utilised **Tailscale** for secure remote access and set up a **Prometheus & Grafana** monitoring stack to capture real-time metrics and performance insights.
- Continually refining the environment to adopt new tools, improve automation pipelines, and enhance system resilience.

Memory Safety Execution in C (Master Dissertation) Mar. 2025 - Sep. 2025

• Conducted a master's dissertation comparing **Checked C**, **Fail-Safe C**, and **Rust** in **retrofitting** memory safety to legacy C software.
• Developed and benchmarked **Zlib 1.3.1** and micro-benchmarks to evaluate **performance**, **safety coverage**, and **developer effort**.
• Implemented automated build and profiling pipelines across legacy toolchains and modern compilers.
• Quantified **spatial and temporal protection trade-offs** through runtime analysis and code-conversion metrics.
• Produced a comprehensive evaluation informing practical paths toward safer systems programming in C ecosystems.

Face Recognition with Raspberry Pi (Bachelor Dissertation) Dec. 2023 - May. 2024

• Designed and implemented a **low-cost home security system** using **Python**, **Flask**, **OpenCV**, and **TensorFlow** on a **Raspberry Pi**, featuring real-time face recognition and motion detection.
• Trained a **Siamese neural network** in Google Colab to perform one-shot face recognition, optimised for single-user accuracy (~**85%**) and efficient on-device inference.
• Developed a **secure**, **user-friendly web interface** for access control and remote monitoring.
• Ensured **ethical** and **privacy-conscious** use by employing diverse training samples, bias-aware evaluation, and local, privacy-preserving data storage.

Additional

Language Skills: Chinese and English (Fluent Speaking/Writing); Japanese (Passed N2 Language Proficiency Test)
Technical Skills: C++, C, Python, Java, Golang, SQL, Unix/Bash
Volunteer Experience: Volunteered as an English and Science teacher at rural schools to help underprivileged students gain access to better education and learning opportunities.
Interests/Hobbies: Certified Shi/Sake Sommelier by Sake Service Institute (SSI): International Kikisake-Shi/Sake Sommelier (Mar. 2022)