Hamish Burke

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github.com/Slaymish

Professional Summary

Systems minded Computer Science candidate with strengths in designing reliable, low friction services. Comfortable working across Python based backends, SQL data modelling and cloud deployments. Track record in turning vague stakeholder requirements into pragmatic technical plans, documenting architecture decisions and reasoning clearly about trade offs. Interested in consumer facing platforms that value clarity, transparency and trust, including modern investment and financial tools.

Education

Master of Computer Science Expected February 2026
Victoria University of Wellington, New Zealand

Bachelor of Science, Computer Science 2022–2024
Victoria University of Wellington, New Zealand

- Specialisation: Cybersecurity
- Academic achievements: Dean's List (2022, 2024); 8.11 GPA (2024)
- Scholarships: Wellington Tangiwai Scholarship (2022)
- Relevant coursework: Cryptography, Network Security, Machine Learning, Software Engineering

NCEA Level 3 (Merit Endorsement) 2017–2021
Tauranga Boys College

- University coursework: A+ in COMPX101, Waikato University (2021)

Technical Skills

- **Programming:** Python, Java, C++, JavaScript
- **System Design:** C4, ADRs, architecture trade-offs, SLOs and RTO/RPO thinking
- **Cloud & DevOps:** AWS basics, Docker, Docker Compose, Terraform (familiar), Git
- **Observability:** Logging, metrics, health checks, basic Prometheus, Grafana
- **Datastores & Infra:** SQL, PostgreSQL, Redis, message queues, caching strategies
- **Cybersecurity:** Malware analysis, cryptography fundamentals, network security
- **Machine Learning:** PyTorch, model serving considerations, MLOps patterns
- **Other tools:** Tailscale, Cloudflare Tunnel, rclone, Backblaze B2

Research Experience

Data Poisoning Attacks on Malware Detection ML Models Nov 2024 – Feb 2025
Victoria University of Wellington — Independent Researcher

- Investigated adversarial and data poisoning attacks against malware classifiers that operate on binary executables
- Developed attack vectors that preserve executable functionality while degrading detector performance
- Ensured all experiments were reproducible, versioned and auditable, habits directly transferable to correctness focused production systems.
- **Technologies:** PyTorch, LightGBM, Docker, Python, PE file analysis
- **Repository:** github.com/Slaymish/malware-classifier-backdoors

Professional Experience

Computer Science Tutor Jul 2023 – Present
Victoria University of Wellington

- Led programming labs for groups of 20+ students, explaining design patterns and architectural trade-offs in approachable terms
- Helped students reason about data correctness, predictable system behaviour and introductory API and system design.
- Provided feedback on assignments, emphasising clarity of design and decision documentation

IT Installation Technician Jan 2024 – Apr 2024
HQ Limited

- Coordinated a time sensitive office relocation, documenting hardware configurations for maintainability
- Verified network connectivity and produced checklists to reduce risk during cutover
- Practised clear stakeholder communication under operational pressure

Customer Service Representative Dec 2022 – Feb 2023
Noel Leeming

- Advised customers on product suitability and handled transactions; built concise, user focused explanations of technical features
- Maintained accurate inventory records and assisted with display optimisation

Software Projects

Raspberry Pi Lab: Architecture Case Study August 2025
Personal Project — Systems Design

- Designed and operate a home production lab on a Raspberry Pi using Docker Compose, Caddy, Cloudflare Tunnel and Tailscale
- Implemented encrypted offsite backups to Backblaze B2 with rclone, authored ADRs and a tested restore playbook
- Focused on reliability and recoverability, explicitly documenting assumptions and expected failure modes.
- Produced clear architectural diagrams and documented trade offs between low cost and availability for recruiter facing portfolio
- **Report:** Home Lab Architectural Case Study

LLM Assistant Apr 2023 – Oct 2023
Personal Project — Lead Developer

- Engineered a modular conversational assistant using the OpenAI API and Java, focusing on extensible architecture and clear module boundaries
- **Technologies:** Java, OpenAI API, REST
- **Repository:** github.com/Slaymish/Java-GPT-Assistant

Wireless Joystick Lighting Controller In progress
Personal Project

- Built a Python based control layer on a Raspberry Pi to send Tapo API commands; planning ESP32 redesign and 3D printed enclosure.

Wedding Event Platform Mar 2023 – Jun 2023
Personal Project — Full Stack

- Built a responsive event management site with RSVP, authentication and cloud image storage
- **Technologies:** VueJS, Firebase

Additional Projects

- **Machine Learning Classifier (COMP307):** Implemented and evaluated KNN and decision trees. GitHub
- **Finance App UI Design (SWEN303):** High fidelity prototype and wireframes. Hi-Fi Prototype
- **2D Platformer:** Led development of a procedurally generated platformer using Godot Engine

Professional Interests

- System design, architecture and clear trade off analysis
- Cloud architecture, observability and disaster recovery
- Secure and reliable backend services, with a focus on clarity, correctness and maintainability
- Consumer tech, including investment platforms and accessible financial tools

References

- **Dr Ghassem Narimani**
  Course Coordinator, School of Engineering and Computer Science, Victoria University of Wellington
  Contact details available upon request
- **Vijyeta Rattan**
  Store Manager, Noel Leeming
  Contact details available upon request