Nic Ung

+1 (604) 446-0857 | nicholaskeaneung@gmail.com | in/nicholasung- | portfolio | nicholasung

EDUCATION

Bachelor of Science, Major in Computer Science with Co-op Expected Grad: May 2026
University of British Columbia, Vancouver, BC
Microsoft Certified: Azure Fundamentals Jan 2025
AWS Cloud Practitioner Essentials Feb 2025

WORK EXPERIENCE

IT Infrastructure Consultant/Code Sensei, Code Ninjas Richmond Jun 2024 – Present
Technologies: TrueNas Scale, Linux, TailScale VPN, Lua, C# Vancouver, Canada

- Designed and deployed a scalable, multi-functional server system, reducing project transfer interruptions and increasing effective instruction time by 30%
- Delivered hands-on instruction in microcontrollers, AI Training, Lua programming while adapting content to students' learning levels
- Supported students grasp of core computer science concepts with interactive lessons

Fintech Software Engineer Intern, Bastion Payment Systems Corporation Jun 2023 – Sep 2023
Technologies: React, TypeScript, Next.js, Python, Bash Scripting Remote

- Worked closely with senior management to develop and implement a business continuity plan in the event of a catastrophic event, improving availability up to 6 9s
- Coordinated with IT and operations teams to test, plan and begin deployment of mitigation systems with complete functionality in place under 2 months of initial rollout

SOFTWARE PROJECTS & HIGHLIGHTS

Just Parry (Video)
Technologies: C++, OpenGL, SDL, GLM, CMake, Git

- Led the prototyping of a responsive, precision-based fighting game amongst a team of 6
- Developed proficiency utilizing GLM for matrix operations, SDL for audio and input handling, and CMake for cross platform compatibility
- Built a custom game engine in C++ to improve input processing, increasing input consistency by 33%
- Applied Agile methodologies for efficient development and project management amongst all the developers
- Utilized leadership and communication abilities to hold weekly scrum meetings, ensuring team alignment and progression

ESP23S3 Oil Pressure Gauge (Github | Article)
Technologies: C++, ESP32, PlatformIO, Product Design, LVGL, 3D CAD

- Designed a complete hardware solution including chassis, mounts and circuitry
- Developed a modular and multifunctional firmware that enables easy adaptation for multiple sensor interfaces
- Authored comprehensive documentation and outlined my development process to help show challenges I had faced and corresponding solutions. Allowing for further development and transparency.

Slippi Name Generator (Github)
Technologies: Next.JS, Vercel

- Developed and deployed a React-based web app that converts user-provided strings into valid Slippi-compatible cheat codes via a custom internal API
- Implemented secure input sanitation and validation to ensure accurate code generation and prevent badly formed or unsafe entries
- Designed with intuitiveness in mind to support a broad range of users

Google Calendar Discord Bot (Github)
Technologies: Python, Docker, OAuth2, Web APIs

- Developed a Python-based Discord bot to automatically sync server events to a shared google calender
- Integrated an Discord Event driven program to call the Google Calendar API to allow for real-time event creation and synchronization

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- Containerized the bot with Docker and automated deployments using GitHub Actions, achieving 99.9% uptime

HomeLab

Technologies: Python, Docker, OAuth2, Web APIs

- Deployed an efficient and low power OpnSense based router to ensure reliable performance and firewall management.
- Deployed a home server to facilitate automated home backups and further redundant storage for family photos and home automation services
- Configured a VLAN for my Virtual Machines, isolating game servers and other hosting environment separate from the main network.
- Self-hosted a suite of services including Jellyfin (home hosted media streaming), Bitwarden (password manager), and a pair of remote VPNs for home network access.
- Implemented a remote build pipeline and containerized services with Docker for easy deployment and maintenance.

Gameboy OBD2 Reader (Github)

Technologies: C++, RP2040, KiCAD, PlatformIO, Product Design, 3D CAD

- Designed a custom PCB to fit inside an Original Game Boy shell to reuse the original buttons and mounting points with minimal permanent modification
- Engineered a circuit to accept the Gameboy and OBD2 inputs efficiently with enough room for the display.
- Developed RP2040 firmware in C++ to process real time OBD2 sensor data and other inputs to display on an LVGL based UI

EXTRA-CURRICULARS

President/Developers, UBC Esports Association May 2023 – May 2025

Technologies: React, NextJS, Docker, AWS EC2, SQL Vancouver, Canada

- Helped develop and deploy a custom lounge management web app for our PC Café. Increasing our front desk efficiency by over 50%
- Actively engaged with code reviews and bi-weekly pair programming sessions that helped improve team understanding of the code base by 20%
- Exercised strong leadership abilities to lead a university club of over 100+ executives, overseeing operations, delegations, and strategic planning
- Directed end-to-end planning and execution of events which hosted over 300 attendees, coordinating communications between internal teams to ensure success and direction.

SKILLS

Languages:	Java, C/C++, C#, Python, Dart, OpenGL, JavaScript, TypeScript, SQL, HTML, CSS
Tools & Frameworks:	GitHub, Bash, VSCode, IntelliJ, Arduino IDE, CMake, Flutter, Next.js, OpenGL, PlatformIO,
Testing:	GDB, JUnit, Valgrind
Other Technologies:	Docker, TrueNas Scale, Unraid, QEMU, Wireguard, TailScale, OpnSense, Cloudflare DNS, Azure, AWS, Vercel
Soft Skills:	Attention to Detail, Focus on Quality, Analytical and Real-Time Problem Solving, AGILE, Object Oriented Programming, CI/CD, Environment Monitoring,