Matthew Nguyen

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Seeking Software Engineering Role

I am a passionate problem solver excited by the challenge of addressing complexity in dynamic and changing environments, driven by the desire to use my technical knowledge to deliver impactful results.

Education

Gonzaga University Aug. 2021 - May 2025
Bachelor of Science in Computer Science *Spokane, WA*
GPA: 3.99/4.00

Skills

Languages: C, C++, Rust, Python, x86 Assembly, Haskell, Bash
Developer Tools: Git, Make, Docker, Jira, Confluence, CI/CD, Linux, Windows, GDB, WinDbg

Experience

Software Engineer Intern May 2024 – Aug. 2024
Microsoft *Redmond, WA*

- Developed and presented a user mode hypervisor save/restore fuzzer built with LibFuzzer and C++
- Enhanced fuzzing efficacy through the research and implementation of structure-aware fuzzing techniques
- Provided key insights to the MORSE team, enabling them to continue their efforts in hypervisor fuzzing
- Identified and fixed two hypervisor bugs uncovered during the fuzzing process

Software Engineer Intern Aug. 2023 – Apr. 2024
Infineon Technologies *Portland, OR*

- Enhanced ModusToolbox, a suite of tools providing a development environment for microcontroller devices
- Created a user-friendly feature enabling the writing and storage of comments during lookup table configuration
- Used Confluence for design documentation, where ideas were presented and refined with senior team members.

Topology Research Assistant Jan. 2023 – May 2023
Gonzaga University *Spokane, WA*

- Conducted Twitter (X) data collection and analysis using Python libraries, including Pandas and NumPy
- Integrated optimizations, including automatic API account switching and a stochastic weighted selection algorithm
- Shared research findings and insights by presenting at the Spokane Intercollegiate Research Conference

Computer Science Lab Manager Aug. 2021 – May 2022
Gonzaga University *Spokane, WA*

- Wrote Bash scripts to streamline maintenance tasks and automate software installations on lab machines
- Assisted students in diagnosing and resolving technical issues, both software and hardware related
- Oversaw computer systems and maintained a clean lab environment in the Computer Science department

Projects

Luna Jetson | *Python, Jetson, Twilio, Flask, Ngrok* May 2023 – Present
`https://github.com/mootqns/luna-jetson`

- Created a real-time pet tracking system with Python, NVIDIA's Jetson Xavier AGX, and JetPack SDK
- Enabled smart notifications using Twilio for pet presence, preventing repeated alerts on pet detection
- Used Flask and Ngrok to serve and securely share static images to conform to Twilio's expectations

Swimming Frog | *Go, Charm, Digital Ocean* Nov. 2023
`https://github.com/mootqns/swimming-frog`

- Developed a text-based user interface, Crossy Road style game within 12 hours for Gonzaga's 2023 Hackathon
- Implemented game logic and mechanics entirely in Go, utilizing Charm libraries for the TUI
- Deployed and hosted the game on a DigitalOcean droplet to enable SSH access for remote gameplay