Jonathan Hendrickson

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WORK EXPERIENCE

Amazon - Project Kuiper
Software Development Engineer II

Aug. 2023 – Present

Redmond, WA

- Developed satellite software on Embedded Linux for telemetry, commanding, and file transfer in Rust and C++
- Authored architecture and design documents to drive team-wide understanding of complex components
- Mentored new hires by organizing lunch-and-learns to understand the broader satellite flight software ecosystem
- Refactored, and added Rust FFI support to C++ actor framework to enable cross-language satellite actors
  - Added cross-compilation support to CMake build scripts to compile for both x86 and ARM targets
  - Implemented off-thread journald socket writer to create non-blocking logging library

Amazon Web Services - FreeRTOS Team
Software Development Engineer I/II

Sept. 2021 – Aug. 2023

Seattle, WA

- Developed embedded + cloud libraries on FreeRTOS such as ExpressLink, HTTP, BLE, OTA updates, and networking
- Designed and implemented a multithreaded MQTT library in MISRA-compliant C99
  - Resulted in cutting network latency by 85%, resolving race conditions, and reducing memory usage by 27%
- Established GitLab CI/CD pipeline for Linux/RPi testbeds, automating Pytest execution to improve correctness
- Received the highest performance rating (Exceeds High Bar) in yearly reviews

Avanade
Backend Developer Intern

June 2021 – Aug. 2021

Seattle, WA

- Developed custom behaviors with Node.js for AltspaceVR such as virtual tic-tac-toe and item-gifting
- Achieved Microsoft Azure Fundamentals certification for tunderstanding of cloud computing principle
- Engaged in agile development methodologies, conducting daily stand-ups and sprint planning
- Conducted code reviews and provided constructive feedback to team members

PERSONAL PROJECTS

cEDH Decklist Database
Head Developer - Full-Stack

June 2020 – Present

Remote

- Developed authenticated web application for viewing, submitting, and editing Magic: The Gathering decks
- Used AWS to power backend of decklist-editing interface (DynamoDB, Lambda, API Gateway, Cognito)
- Created CI/CD in GitHub Actions to automatically validate and deploy website updates on every commit
- Lead team of 3-5 developers to apply continuous updates, performance improvements, and maintenance

EDUCATION

University of Washington Bothell
BS, Computer Science & Software Engineering, Minor in Informatics

Sept. 2018 – Aug. 2021

Bothell, WA

- Courses: Operating Systems, Hardware and Computer Organization, Database Systems, Machine Learning
- As a Teaching Assistant for CSE 180: taught data manipulation, visualization, and statistics to CSE students
- Graduated with a GPA of 3.70

SKILLS

- Primary Languages: C, Rust, C++, Python, Javascript/Typescript, English
- Secondary Languages: Java, Kotlin, SQL, R, Go

Technologies: Linux, RTOS, AWS, Azure, GCP, Docker, HTTP, MQTT, BLE, QEMU, CMake, Git, GitHub Actions, GitLab

Concepts: CI/CD, Embedded, Operating Systems, Build Systems, Networking, Security, Performance, Cloud, IoT