Aaron Dyer

adyer.jobsearch@gmail.com • 360.726.9323 • Engineered-By-Aaron.com • linkedin.com/in/aaron-dyer

Summary

Results-oriented Embedded Software/Firmware Engineer, with particular strength in delivering sustainable and forward-thinking solutions in power and resource-constrained environments. Leveraging extensive experience in embedded systems, AI technologies, and Agile project management, I consistently deliver impactful improvements— particularly in collaborative and high-performing teams. I'm deeply committed to continuous learning and applying modern technologies to solve complex challenges.

Technical Skills

- Core Technologies: RTOS (ThreadX, FreeRTOS, Just-In-Time), AI/ML (GPT-4, LLMs), Embedded Systems Development, Power Efficiency Optimization
- Programming Languages: C++, C, Python, JavaScript, HTML/CSS, TypeScript
- Tools/Environments: Git, Docker, Kubernetes, Linux (Debian, Red Hat, Pop!OS, Ubuntu), Windows, Mac
- Hardware/Digital Design: ARM, x86, Verilog/SystemVerilog, Assembly (x86, ARM)
- Hardware-Software Co-Design: Demonstrated success in integrating multi-level software and firmware layers to deliver robust, reliable high-performance embedded systems
- AI Technologies: Experience with GPT-4 and LLMs, leveraging AI for predictive analytics (JIRA forecast improvement) and process automation within embedded systems development

Experience

(2022-2025) HP Print

- Reduced customer experience scores by over 40% and average power consumption by 50%+ through the design and implementation of Energy Star compliant printer firmware, contributing to significant environmental and user satisfaction improvements.
- Developed a robust embedded web server in TypeScript, enabling seamless user interface control and multilingual support.
- Led the development and managed a team of peers to deliver an AGILE story point estimation prototype during the HP AI Hackathon using GPT-4, leveraging archived JIRA data to improve forecast accuracy and project schedule predictability.
- AGILE Team SCRUM master; trained to deliver accurate and timely project planning, promote peer collaboration, and track progress through proven project management techniques.
- Debugged, ported and modernized legacy systems, optimizing performance in resource-constrained embedded environments and preparing C code for use in high-reliability C++ production applications.

Projects

HP AI Hackathon – Project Management, Innovation and Presentation Lead

Led a team of peers to top prize in an AI rapid-prototyping competition. Our solution sharpened AGILE story point estimation in JIRA; our prototype trained on archived JIRA data from legacy projects/epics, leveraging GPT-4 to improve AGILE story point estimations and project schedule predictability. This project demonstrates expertise in AI technology application, project leadership, and a commitment to curiosity in tech innovation.

Tools and Environments

- C++: Advanced C++ proficiency, including object-oriented programming, data structures, and algorithms, extensively utilized in embedded systems development and leading to significant power and resource optimization. Record of successful professional experience, delivering robust solutions which are now utilized in globally-produced printer products (5 yrs)
- C: Strong foundation in low-level programming, memory management, and systems programming, with experience modernizing legacy systems for use in C++ environments. (5 yrs)
- Python: Scripts and automation tools deployed in engineering and production environments. (3 yrs)
- Assembly Language: x86, ARM, etc. foundations, experience with real-time memory and thread debugging for performance optimization and low-level hardware interaction. (5 yrs)
- JavaScript, HTML/CSS, TypeScript: (2 yrs)
- Bash/Linux: Strong command-line skills for system administration, scripting, and automation. Experience developing in Linux distributions (esp. Debian, Red Hat, Pop!OS, Ubuntu), Windows, and Mac environments.
- Verilog/SystemVerilog: Familiar with hardware description languages for integrating digital circuits.
- Networking: Understanding of containerization, Docker, Kubernetes, and virtualized compute environments.
- Version Control: Experienced in using Git for collaborative development, experience delivering code to CI/CD systems for OTA firmware updates.

Education

University of Washington - 2022
Bachelors of Science, Electrical and Computer Engineering
Concentration in Embedded Computing Systems