Caleb Voorhees cvoorhees44@gmail.com

EDUCATION

B.S. Computer Science Seton Hill University

SUMMARY OF ROLES

- **Software Engineer:** Developing, deploying, and testing embedded software for RTOS, desktop software for Windows OS, mobile applications for iOS, and cross platform web applications.

- **Technical Lead:** Project scoping, planning, and organization on multiple teams of different sizes using different development styles (Agile, Waterfall). Drafting, revising, maintaining software documentation (SRS, SDS, SBOM, etc). Interfacing with management and clients to give updates, explain problems, brainstorm solutions.

- **Engineering Recruiter:** Attendance at multiple career fairs seeking intern/entry level software and QA engineers. Holding virtual and in person technical interviews.

TECHNICAL SKILLS

Programming Languages: C++, C#, C, Python, Swift, Javascript, PHP, Bash, Powershell

Tools: Git, Tortoise SVN, Azure, TFS, DevOps, Visual Studio, VSS, WSL, Jira, GCC, CMake, Uboot, Bitbake, SSH, Win32 Disk Imager, PSOC Creator, Tera Term, iTerm, .NET, React, Qt, Jenkins, Docker, VirtualBox, Vercel

PROFESSIONAL EXPERIENCE

Student Programmer at Seton Hill University [June 2022 - June 2023]

- *SHIP Student/Faculty Portal:* Migration of a **PHP** web app from Symfony to Laravel framework
    - Migration of various student and faculty facing features using **PHP** with Laravel/Filament to query and present data from a **MySQL** database

Design Services Software Engineer at C Speed [June 2023 - March 2025]

- *Patient Monitor Medical Device*: **C** and **C++** development for a **Yocto** embedded system
    - **Linux kernel** development including removal/modification of various drivers, creation of udev rules, and adjusting kernel config**s**
    - Application UI overhaul using **C++** with **Qt** graphical framework adhering to FDA usability requirements and **UI/UX** design standards provided by the client
    - Development of an automated **bitbake** build process running on an **Azure** cloud **Ubuntu** VM using **Jenkins** continuous integration

- *Medical Device Service Tool:* **C#** development using **.NET** framework
    - Development of a **WPF** desktop application which interfaces with a medical device connected via USB
    - Implementation of software security features such as dynamic **AES encryption**, password complexity policies, and automatic timeout/logout
    - Development of a **unit test** suite for the core application in **Visual Studio**

Radar Software Engineer at C Speed [March 2025 - Current]

- *Web-based Air Situation Display:* **Javascript** development using **React**
    - Parse **ASTERIX** messages to extract multiple categories of plot data and play back hours of radar, ADS-B, and tracker recordings in real time
    - Integrated **DeckGL**, a React library which utilizes GPU hardware to maximize performance in web apps that demand fast real time graphics
    - Use of **OpenStreetMap** to overlay radar plots on a variety of global map designs.

- *Light Wave Radar Data Processor:* **C** and **C++** development for a **Windows OS**
    - Memory safety audit adding more robust bounds checking, use of “safe” versions of C functions, replacing old **IPP** library calls with standard C or C++ library calls
    - Adding a **TCP** socket communication layer to multiple applications enabling bidirectional communication between multiple machines on a **LAN**