

# SEAN BALBALE

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Portfolio Site: [cherrybrooknetworks.dev/](https://cherrybrooknetworks.dev/)

## EDUCATION

TRINITY COLLEGE – HARTFORD, CT

EXPECTED MAY 2027

**Bachelor of Science in Electrical and Computer Engineering**

GPA: 3.65

**Bachelor of Science in Computer Science**

Coursework: High-Performance Computing, Embedded Systems Design, Deep Learning, Software Engineering, Microelectronic Circuits, Intro to Computer Systems, Data Structures & Algorithms, Calculus 3, Applied Linear Algebra, International Trade.

Extracurriculars: **Varsity Athlete** - Trinity College Men's Rowing, **Singer & Technology Chair** - The Trinity College Accidentals.

## Skills

PYTHON | JAVA | C++ | TYPESCRIPT | REACT | NEXT.JS | MATLAB | ARDUINO | FPGA | LINUX | ASM | TAILWIND CSS | SQL | ANGULARJS | GIT | SOLIDWORKS | 3D PRINTING | VERILOG | SYSTEMS ENGINEERING

## Work Experience

BULLHORN – BOSTON, MA

SUMMER 2025

**Software Engineer Intern.** Contributed to backend services across the Shield and Builders teams, supporting projects for the SEARCH\_AI, ATS\_CRM, and MIDDLE\_OFFICE engineering groups. Executed a major framework migration (BH Boot 1.0.0) centered on upgrading multiple Java applications from Spring Boot 2 to 3, which involved updating javax to jakarta namespaces and refactoring the data access layer. Led a critical security initiative to upgrade core logging dependencies to Log4j2. To further improve code quality, refactored legacy test suites from TestNG and JMockit to JUnit 5 and Mockito and participated in the full software development lifecycle by managing feature branches, submitting merge requests, and conducting code reviews.

**EAST COAST METROLOGY: A DIVISION OF IN-PLACE MACHINING COMPANY – TOPSFIELD, MA**

SUMMER 2025

**Metrology Intern.** Conducted in-house and on-site calibrations and precision measurements for a metrology company. Calibrated high-performance measuring equipment, including portable CMMs, total stations, large-volume scanners, and laser trackers. Measured engineering parts for clients to make sure they matched CAD tolerances. Updated internal use CAD models in SolidWorks.

**TITAN ADVANCED ENERGY SOLUTIONS – SALEM, MA**

SUMMER 2023

**Intern.** Assisted the lab team in scanning electric vehicle batteries with ultrasound sensors. Wrote software using Python to visualize ultrasound JSON data as waveforms to complement generated heat maps. Data is used to look for defects in the batteries.

**CHERRYBROOK NETWORKS – WESTON, MA**

MARCH 2019 – MAY 2025

**Freelance Software and Technical Support.** Started technical support and software development business to support local companies and nearby students and parents. Installed and configured software applications, designed and built custom computers, installed Wi-Fi systems, and automated cloud backups.

**WESTON PUBLIC SCHOOLS – WESTON, MA**

October 2022 – May 2023

**Engineering Teaching Assistant.** Assisted the Weston High School engineering teacher in developing course curriculum and running classes. Wrote and graded quizzes for physics and high school engineering courses. Maintained workshop tools, including laser cutters, 3D printers, band saws, and other woodworking tools.

## Project Experience – More on Portfolio Site

**EMBEDDED HEART RATE MONITOR.** Designed and wired the complete hardware system for a heart rate monitor and click counter.

Wrote Assembly language firmware for an 8051 microcontroller to read external inputs, process signals, and display the real-time count.

**HAPTIC HORIZON.** Designed and built a wearable haptic alarm system for the visually impaired, writing embedded C++ firmware for an Arduino-based platform to integrate ultrasonic sensors and a haptic motor

**CHERRYBROOK NETWORKS.** Full-stack personal portfolio and business website built with Next.js, React, and TypeScript. Styled with Tailwind CSS and modern UI libraries. Developed a custom backend API route to handle contact form submissions and send emails. Implemented features like a dark/light mode theme toggle and an embedded PDF resume viewer.

## Personal

Love to cook. Wrap a mean samosa and a can create a killer katsu ramen. Enjoy lifting weights, running, and getting off an Erg after a 2K sprint.