

Joseph Bowen



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Objective

Biomedical Engineer looking to pivot into computer science. Experienced writing code in various languages, solving problems, and working with a team. While a majority of my professional experience is engineering related, I have a solid portfolio of web and mobile applications.

Education

B.S. Engineering, Biomedical Concentration, *LeTourneau University*, GPA: 3.56/4.00

Skills

- Web development (Javascript, React, NextJS, Svelte Kit, Tailwind, HTML, CSS, Supabase, Appwrite)
- Python, Matlab, C++
- Microcontroller programming (Arduino, ESP32, etc.), data acquisition, data processing

Professional Experience

Test and Manufacturing Engineer – Beeline Wheelchairs (Mar. 2024 – Present)

Improved wheelchair designs, manufactured parts using a laser cutter, maintained manufacturing equipment

Designed and built an inventory software using JavaScript React framework

Improved documentation and part drawings, wrote an assembly and usage manual

Skills: Laser cutting, sheet metal fabrication, documentation, CAD, JavaScript, React, Tailwind

Senior Test Engineer – DEKA Research (Sep. 2021 – Feb. 2024)

Designed and wrote test cases according to ISO, ANSI, and BS EN standards

Built test fixtures, performed tests on devices, and followed strict documentation practices

Managed a test team, reviewed engineering change orders, and determined testing impacts

Skills: Team management, 510(k) for medical devices, CE Mark certification, verification testing for ISO/ANSI/EN standard compliance, technical writing, fixture design and documentation, Python

Lab Engineer (Internship) - A&K Systems (June 2020 – Aug. 2020)

Researched, implemented, and improved designs for an automated robotic deterrent system

Skills: Microcontrollers, Python programming, mechanical and electrical component testing and integration

Programming Projects

- **Prettyscreenshot.com** – Web based screenshot editor with AI features built with React and Supabase.
- **ConvertFast** – File converter built with React and Electron to run on Windows.
- **ChessStatTracker.com** – Visualize various performance metrics of Chess.com players. Built with Svelte Kit.
- **Cookifyai.com** – AI recipe web app and mobile app, built with NextJS for web and Expo for mobile.
- **Honeycomb** – All-in-one application designed for Beeline Wheelchairs manufacturing. Tracks patient information, clinics scheduling, inventory and production management. Built using React and Pocketbase.
- **SatTrak** – Live 3D visualization of satellite orbits using data from TLE API using Javascript and React Three Fiber.

Engineering and Research Projects

- Designed, built, and programmed an H2S gas detection and logging system
- Performed VICON motion capture and MATLAB data analysis of an articulated foot orthotic