Jonathan Bodner

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SKILLS

Languages: C, C++, Java, Python, SQL, HTML, CSS, JS, VHDL, Verilog, Processing, MATLAB, Assembly
Technologies: Git, GitHub, React, Node.js, Bootstrap, Arduino, Quartus, LTSpice, Windchill, Docker, Creo, Auth0

WORK EXPERIENCE

Empire Life Insurance | *Full Stack Developer*   *Jan - April 2022*
- ⇢ Upgraded a Dockerized management application in React, Redux & Django used by support groups for quick, secure, and organized access to user data. Greatly reduced time spent onboarding and approving advisors
- ⇢ Led the creation of a SPA login page hosted on GCP to facilitate testing and debugging for the IAM team
- ⇢ Implemented tenant-wide biometric & SMS based Multi-Factor Authentication. Modernized and future-proofed the company's authentication & post-login processes. Both tasks were achieved using Javascript and Auth0

ExtentCom | *Software Developer*   *May - Aug 2021*
- ⇢ Designed a browser based Command Line Interface page using HTML, CSS & JS that uses AJAX to allow users to input commands & receive responses from a remote machine's CLI API in real time
- ⇢ Built an API that replicates CLI behavior with Node.js. Used to test the above front-end
- ⇢ Researched and developed a gradient algorithm that will accurately determine location of nodes on a map based on limited node locations and interconnecting distances. Analyzed performance by conducting tests in MATLAB in order to optimize accuracy and runtime

Terrestrial Energy | *Software Developer & IT Technician*   *Jan - Apr & Sep - Dec 2020*
- ⇢ Developed Windchill workflows using Java and the Windchill API in order to automate numerous product lifecycle management processes, improving data accuracy & security in SQL tables while also reducing the time spent by users on redundant tasks
- ⇢ Collaborated with the QA team to overhaul the existing Problem Identification process. Planned, managed & designed all required software features and changes in Windchill
- ⇢ Arranged installation, verification and version control for multiple user software packages
- ⇢ Analyzed server usage and planned improvements to increase performance by up to 10x

PROJECTS

Real-Time Operating System: C based operating system executing on a microcontroller with memory management, inter-task communication, console I/O and real-time scheduling capabilities

Matrix Multiplication Module: Verilog based systolic matrix multiplication program deployed on a FPGA board

Algorithm Visualizer: Java based Processing application to display sorting algorithms in real time

Rock Paper Scissors: Responsive browser based game using HTML, CSS, JS, Bootstrap & JQuery

Obstacle Avoidance: Used ultrasonic sensors and an arduino to safely navigate a robotic vehicle

Path Visualizer: Applied a modified greedy algorithm on input elevation data in Java to determine a path with the lowest change in elevation and highlight it on a grayscale map interface

EDUCATION

University of Waterloo | *BASc. in Computer Engineering*   *Sep 2019 - Apr 2024 (Expected)*