Robert Elliott

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Computer Engineering graduate with expertise in Software Engineering, application development, embedded systems, and IoT solutions. Proven ability to develop innovative software and hardware solutions, and learn new technologies. Willing to relocate.

EDUCATION

Brigham Young University - Idaho | B.S. in Computer Engineering | GPA: 3.5 | Graduated: December 2024

Coursework:

- C/C++
- JavaScript
- Computer Systems
- Algorithm Design
- Fundamentals of Digital Systems
- Microproc Based System Design
- Applied Programming
- Digital System Design
- Computer Architecture
- Embedded Systems
- Object-Oriented Programming
- Data Structures

Key Projects:

FSM Divider Basys3 FPGA

- Engineered a Finite State Machine divider on Basys3 FPGA using Verilog allowing for binary division operations
- Designed and implemented hardware architecture utilizing flip-flops and decoders for efficient computation
- Developed BCD conversion system for accurate 7-segment display output of division results

IoT Automated Home System

- Developed and designed responsive mobile application using React Native for smart home device control
- Utilized ESP-IDF to program a hub and a peer ESP32 to control smart home devices through the ESP-NOW protocol
- Utilized MQTT server to handle messaging and commands between mobile application and Hub device

Python Game Framework

- Developed a simple game framework utilizing inheritance and polymorphism in Python
- Implemented core gaming functionalities including collision detection, sprite management, and event handling
- Created a fully functional Pong game and Block Breaker Game featuring audio integration, graphics rendering, and score tracking

SKILLS

Programming Languages: Python, C/C#, JavaScript, System Verilog, HTML, CSS, React/React Native, MatLab
Software Engineering: Data Structures, Algorithm Design, Software Design, Debugging, Application Development
Hardware Engineering: Assembly, MCU Programming, Embedded System Design, LTSpice, QuickField
Soft Skills: Leadership, Communication, Problem Solving, Management, Data Analysis

EXPERIENCE

Freelance Developer   **January 2025 - Present**

- Developed a fully responsive business landing page using HTML and CSS to enhance user experience and increase client engagement.
- Currently building a dynamic web app using Next.js and CSS, providing real-time examples and simulations to educate users about anti-manipulation tactics. Features will include interactive scenarios and real-time data feedback.

Automotive Technician/Mechanic   **C&S Auto Repair | Idaho Falls, Idaho| January 2022 - July 2022**

- Diagnosed and resolved complex system failures using diagnostic tools and systematic troubleshooting methodologies
- Performed electrical system repair requiring detailed understanding of electrical schematics
- Collaborated with team members to solve complex mechanical and electrical system challenges

General Manager   **Physiq Fitness | Salem, Oregon | June 2017 - January 2021**

Physiq Fitness | Salem, Or

- Developed sales strategies and team development programs on a monthly basis to drive an increase in membership sales and increase profit margins.
- Collaborated with local businesses to build corporate health programs and educate others on the importance of health.
- Held an average NPS (Net Promoter Score) of 68 during my tenure as general manager.
- Led the management team in appointments set and sales closed during the final months of my employment.
- Created an employee growth system with the management team to streamline a path of growth within the company.