Jake Vaughn

Computer Engineer

CONTACT

jakevon358@gmail.com
(563) 690-8784
Des Moines, IA
Linkedin
Website
Github

SKILLS

C, C++
Java
JavaScript / TypeScript
NodeJS / Npm / Yarn
Verilog / VHDL
Solidity (Hardhat)
SQL (MySQL, SQLite)

Extracurricular Activities

ISU Mountaineering and Climbing Club (MCC)
Executive Club Member – Risk Manager

Information Assurance Student Group (IASG)
Student Group Interested in Cyber Security

Great Plains Math League (GPML)
Math Competitions

EDUCATION

Iowa State University, Ames IA
— *B.S. Computer Engineering*

Aug 2017 - May 2021 3.45 GPA

Relevant Coursework: Assembly Level Programming, Software Development Practices, Design/Analysis of algorithms, Cyber Security Concepts, Principles of Programming Languages, & Embedded Systems Design.

EXPERIENCE

Self-Employed — Software Development

July 2020 - September 2022

- Developing MEV Bots using Typescript, Node.JS, and Hardhat
- Creating/managing Blockchain Nodes for RPC endpoint connections
- Setting up hardware, firmware, and software for Ethereum mining

PROJECTS

MIPS Processor

Simulation of a processor build from scratch in ModelSim using VHDL on an Altera FPGA board. The processor featured 5 stage pipelining, a custom instruction set, and hazard detection.

CprE 288 Mars Rover

iRobot programmed so that it can maneuver through terrain avoiding collision with the barriers using SONAR and IR sensors. Required the use of embedded C programming to handle interrupts, timers, and automation.

Design of a Temperature Sensor Device

Custom-built ASIC for a temperature sensor device to track the moving average temperature and the standard deviation of the temperature using Cadence Genus and Innouvus.

Visualizing Substrate

Network Visualization tool for converting transactions from an SQLite database into a node and edge list importable into Gephi. Built with TypeScript and SQLite. Utilizes RPC calls to substrate-based API endpoints.