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George Main IV

Experience

Hyannis Port Research, Needham, MA — June 2020 - April 2021
Associate Software Engineer

- Developed low-latency financial markets infrastructure written in C
- Implemented and iterated upon client specifications for entry into new regions and markets
- Introduced new company-wide C based unit testing and mocking frameworks
- Created scripts and procedures for reducing occurrence of incorrect production configurations
- Collaborated with the GUI team to introduce Java based unit testing

Capital One, McLean, VA — June 2019 - August 2019
Data Engineering Intern

- Developed user facing features for an Angular 4 based Chrome, Firefox, and Edge browser extension
- Created error logging framework to trace the root-cause of production issues
- Proposed and implemented unit testing improvements by mocking Angular components

GE Appliances, a Haier Company, Louisville, KY — August 2018 - November 2018
Electrical Engineering Co-Op

- Designed printed circuit boards with Cadence Allegro
- Populated, tested, and debugged prototype circuit board designs
- Planned and ran Accelerated Life Tests (ALT) to determine the reliability of individual components
- Completed Failure Mode and Effects Analysis (FMEA) on production designs

Alarm.com, Tysons, VA — June 2018 - August 2018
Device Engineering Intern

- Designed a full-stack application for the real-time collection of research and development data
- Used HTML/JavaScript/CSS for the front-end and Python/Flask/PostgreSQL for the back-end
- Wrote tools in C and Python to upload sensor data from embedded devices using a RESTful API
- Deployed the completed application to Amazon Web Services (AWS) Elastic Beanstalk

Education

Rose-Hulman Institute of Technology, Terre Haute, IN — August 2016 - May 2020
Graduated, 3.91 GPA

- Bachelor of Science Computer Engineering and Software Engineering Double Major
- Java and C based Software Engineering Curriculum

Projects

Rose Grand Prix Engineering (Formula SAE) — August 2016 - May 2018
Electrical Team Member

- Created on-vehicle data acquisition system for logging CAN bus messages into InfluxDB with C++
- Designed a real-time 915 MHz telemetry system for monitoring systems during events
- Used Altium for designing PCBs and C for programming PIC microcontrollers

W1GIV Auctions — June 2014 - Present
Creator/Developer

- Created an auction management system with HTML, JavaScript, PHP and MySQL
- Replaced a Microsoft Access database with limited functionality
- Allows for registering attendees, tracking sold items, parallel checkouts, and emailing receipts
- Currently used by two organizations to manage yearly auctions

Skills

Programming Languages - C, Java, Python, JavaScript, PHP, C++