Bradlee Harrison

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EDUCATION

University of Oklahoma Norman, Oklahoma
Master's of Science, Electrical and Computer Engineering Planned May 2024
Bachelor's of Science, Electrical Engineering | Cumulative GPA: 4.00 Planned Dec 2022

SKILLS

C, C++. C#, Java, Javascript, Python, MATLAB, HTML, CSS, SQL, React, Git, SVN, Linux, Excel, Signal and Image Processing | Design in Multisim, ADS, EAGLE | FPGA Design, Quartus, ModelSim

EXPERIENCE

Software Intern Dec 2021 - Present
PCI Energy Solutions Norman, Oklahoma

- Supported energy independent system operators using software solutions through development, testing, documentation, and quality assurance for 30+ new product features
- Collaborated with team members to develop product enhancements in Java and applied changes to codebase managed in Git and SVN
- Led the analysis and resolution of defects in real time energy trading results by verifying REST API endpoint results and correcting code requesting unit generation schedules from the API
- Used SQL to query stored data and analyzed results to find root cause of data issues and defects

Engineer Trainee Jun 2021 - Aug 2021
Tinker Air Force Base 76th Software Engineering Group Midwest City, Oklahoma

- Provided engineering solutions for the support of the Air Force Civilian Service by developing tests, features, and bug fixes for virtual mission control, flight, and maintenance software in C#
- Developed and implemented a test program set to detect and troubleshoot component failures within a unit-under-test circuit board through diagnostic and performance testing
- Designed a custom 3D-printable wedge using Autodesk Inventor to fix a faulty set of tables from flipping over; wedge was used to prevent the need to replace desks with broken levers

PROJECTS

Sooner Rover Team Member | University of Oklahoma Competition Team | Sep 2021 - Present

- Managed electrical wiring of relays, motors, microprocessors, and sensors for a mars-style rover
- Interfaced with a ZED-F9P Multi-band GNSS receiver module using I2C protocol to process satellite data and generate positional coordinates within an accuracy of one meter
- Wrapped C/C++ code libraries for a Swift GPS navigation device to a Python library, allowing for easy extension in the scripting environment and smoother integration for future development

MIL-STD-1553 Data Bus to Ethernet Interface | Capstone Project | May 2022 - Dec 2022

- Programmed an embedded Linux BeagleBone Black board with firmware in C to act as a MIL-STD-1553 Bus Monitor and Remote Terminal using a HI-1575 transceiver chip
- Implemented a TCP/IP socket connection between a host computer and a Beaglebone Black to receive and transmit data and status words over ethernet interface

AM Radio System | Course Project for *Electronics Lab* | April 2022

- Created a transmitter circuit to generate, modulate, and amplify an audio signal from a microphone to create an amplitude modulated signal with a 100kHz carrier
- Designed a receiver with an envelope detector circuit and audio amplifier to detect the 100kHz amplitude modulated signal and output the reconstructed signal to a speaker