Christopher Burch

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chris-burch/chrisburch.github.io

Experience

Engineer June 2017 - Present
PacifiCorp, Meter Engineering Salt Lake City, UT

- Designed the metering, panel, junction box, current and voltage connections, and communication when a new substation or metering station needs to be built
- Drafted and revised schematic drawings in AutoCAD that reflected new changes done to metering at plants and substations
- Discussed with team members about project requirements, plans, and problems, requiring strong written and oral communication skills
- Implement KYZ or Modbus totalization in metering that incorporates multiple meters feeding one-meter energy data
- Experienced with a variety of communication protocols, such as Ethernet, modem, RS232/485, and cell phones (DIGI cell packs).

Engineering Co-op June 2016 – May 2017
Moog Inc., EMC/EMI Lab Salt Lake City, UT

- Tested the actuators on the Comac C919 for EMI sensitivity by applying different frequencies using current transformers, and antennae
- Designed and built a driver for a circuit that simultaneously outputs different frequency pulses for different types of military tests
- Assisted with testing the electromagnetic interference of a Boeing 747 spoiler and electric motor controller
- Constructed drivers to enable amplifier switches for a reverberation chamber
- Involved in radio frequency design projects to properly test actuators and spoilers to meet contract testing specifications

Education

BS, Electrical Engineering September 2015 – May 2018
University of Utah Salt Lake City, UT

Projects
Senior Project Benzene Sensor Network Design

- Programmed a LoPy with Python to enable the sensor to deliver data wirelessly and enable devices to communicate with each other on a network
- Calculated the required potentiostat components by using amplifier circuit theory
- Employed electronic test methodology by testing each component in lab using multimeters, oscilloscopes, and computer software, such as Cadence, resulting in a successful potentiostat design
- Optimized the potentiostat PCB design in Eagle by including functionality such as GPS, temperature sensor, digital to analog and analog to digital converters
- Created several formal presentations and papers to demonstrate the process and the final product of the Benzene Sensor Network device to my peers, professors, and industry experts

Programming

- Python – Video game
- C++ - Engineering calculator
- MATLAB – Synthesizer, BPSK modulation, continuous-time filter, analyze 2nd order launcher
- Verilog – Digital Lock