Julian J. Peters
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Available for August 2020

Education

Bachelor of Science in Computer Engineering
Wentworth Institute of Technology | Boston, MA, **Expected August 2020**
Relevant Courses: Digital Signal Processing, Advanced Digital Circuit Design, Network Theory II (AC/DC analysis), Microcontrollers (C), Object-Oriented Programming (C++, Java, Python), Analog Circuit Design, IoT, Computer Architecture, Signals and Systems, Operating Systems, Engineering Senior Design
Minor: Physics **Cumulative GPA: 3.6**

Computer Skills

Languages: C, C++, Java, Python, Javascript, FORTRAN, LaTeX, SQL
Operating Systems: Windows, MacOS, and Linux
Software: Multisim, AutoCAD, Office Suite, LabVIEW, SolidWorks, Eclipse, PSpice, Altium, ORCad, Cadence Virtuoso
Test Instruments/Devices/Protocols: Oscilliscope, Function Generator, Multimeter, Power Supply, Breadboard, BJT's, MOSFET's, OP-Amps, Arduino, Raspberry Pi, RS232, I2C, SPI, USB

Technical Experience

Hardware Security Intern **Fall 2019**
Wentworth Institute of Technology | Boston, MA
- Collaborated with campus professors to expose side-channel attacks in iPhone keyboards
- Collected and processed audio data to find patterns that would prove the side-channel attack exists
- Utilized knowledge of Python to create a machine learning model custom to our research

Electrical Engineering Intern **May 2018 - April 2019**
EdgeTech | Wareham, MA
- Worked with other Electrical and Product Engineers on the newest underwater imaging technology
- Performed schematic changes, created system diagrams and assembly diagrams to be used in debugging and assembling future hardware
- Carried out engineering change requests and performed environmental testing
- Designed printed circuit boards in Altium, created factory acceptance tests for the boards, debugged and assembled them.

Multi-Channel Attacks on iPhones | Senior Design
- Performed research on the most up to date side channel attacks that currently exist on smartphones to gauge what our project will need to accomplish
- Created an iOS app in Swift that would collect and store data for the research on our device
- Collected and processed audio, gyroscopic and accelerometer data from the iOS device to Python for visualization and interpretation

Python Temperature Control w/ GUI | Microcontroller Sensor Networks
- Created a circuit consisting of a heating resistor, control MOSFET, temperature sensor and ADC module that would report I2C data to a Raspberry Pi and send out a digital signal to control the temperature of the heater.
- Utilized the guizero library to make an interface that the user could control the high and low threshold for the heater. Also displayed on the GUI was the updated temperature and whether the heater was switched on or off.

Circuit Design from Logic Gates | Advanced Digital Circuit Design
- Used state diagrams along with knowledge of gates, sequential logic, flip-flops, counters and multiplexers to create an integrated circuit that would emulate the function of a coffee maker.
- Implemented the design in Cadence Virtuoso using hierarchical design methods starting from logic gates

Non-Technical Experience

Book Store Attendant **September 2017 - September 2019**
Wentworth Institute of Technology | Boston, MA
- Provided customer service and support while processing cash and credit transactions
- Maintained the cleanliness of the books and other school merchandise

Computer Service Specialist/Shift Manager **August 2014 - August 2016**
The Mac Express | Wareham, MA
- Provided support for MacOS and iOS, lead classes for customers, Aided in new employee training and performed various repairs on computers and phones