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Paul Kelly

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Objective

To further develop computer engineering skills and gain professinal experience by working in a co-op position in the summer of 2021 from May to August.

Education

Rochester Institute of Technology — Rochester, NY
Bachelor of Science in Computer Engineering — *Expected Graduation: May 2022*

- **GPA**: 3.71
- **Courses**:

Digital System Design I, II	Computer Science I, II
Intro to Embedded Systems	Computer Architecture
Digital Signal Processing	Applied Programming in C

Technical Skills

Languages: C, Python, ARM Assembly, VHDL, C#, Java, Visual Basic, Smali

Software: Keil, Xilinx Vivado, Altium, LTSPICE, MATLAB, Linux, Vim

Hardware: FPGA, Raspberry Pi, ARM Cortex M0, Teensy, Oscilloscope, Digital Multimeter, Signal Generator, Spectrum Analyzer, VNA/PNA, Solder Iron

Experience

Saab Defense and Security — Syracuse, NY
Electrical Engineer Intern — *May 2019 - Dec 2019*

- Verified VHDL modules by generating files of known good inputs and outputs with Python, then writing a VHDL testbench to simulate the module with the test data
- Removed uncertainties in board redesign by creating and running test processes on potential components
- Reduced test times by automatically generating mixer intermodulation tables through instrumentation of test equipment with Python and the NI VISA API

Schlosser Steel Inc. — Hatfield, PA
Computer Technician Intern — *May 2017 - Aug 2018*

- Greatly reduced the time required for accounting to record work hours by automating the timesheet logging system
- Augmented Revit CAD design through plugins and complex element models
- Improved sales estimates by writing a program that generated shop fabrication statistics

Projects

RIT Formula SAE

- Designed a PCB for use in a custom battery management system on the electric car
- Made wireless telemetry possible through an Xbee network transmitting serial messages to a Raspberry Pi running an internet access point with a webserver
- Designed the dashboard PCB to hold a teensy microntroller that managed a TFT screen driver

Boosted Android

- Enabled wireless and USB gadget drivers by pulling LineageOS 16.1 source tree and modifying kernel code
- Ported Hijacker source code to work with custom driver access
- Added custom functionality to apps by reverse engineering compiled apks without source code

MIPS Processor Model

- Designed the instruction fetch, instruction decode, execute, memory access, and write back stages of the MIPS processor in VHDL