

# Alexander D. Gotsis

SEEKING EMPLOYMENT STARTING JUNE 2019

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## Education

### Carnegie Mellon University

Pittsburgh, Pennsylvania

B.S. IN ELECTRICAL AND COMPUTER ENGINEERING

Expected May 2019

- Overall GPA 3.61/4.00 as of May 2018
- Carnegie Institute of Technology Dean's List Fall 2015, Spring 2017, and Spring 2018
- One additional semester left for M.S. in Electrical and Computer Engineering if continue education

## Selected Coursework

Operating Systems Design & Implementation	Structure & Design of Digital Systems	Fund. of Electrical Power Systems	Calculus I/II/III
Embedded Systems Software Engineering	Intro to Computer Systems	Intro to Embedded Systems	Physics I/II

## Experience

### MITRE Corporation

Bedford, Massachusetts

EMBEDDED SOFTWARE COOP/INTERN

May 2018 - August 2018

- Develop and test a multiple power & clock fault testing suite as Python interfaces for Arbitrary Waveform/Function Generators.
- Profile Dwenguino AVR instructions and develop suite for profiling other hardware implementations.
- Engineer methods to extract cryptographic information at a distance by means of electromagnetic emissions.
- Alter programmable logic for secure video game console eCTF to store symmetric keys. Win 2nd place in eCTF and Iron Flag Award.

### Robotany

Pittsburgh, Pennsylvania

ELECTRICAL ENGINEERING POWER SYSTEMS INTERN

May 2017 - May 2018

- Design 3-phase delta 240V electrical power system for robotic vertical farm, fixture wiring, and control racks.
- Specify and implement power system including conduits, transformers, and load centers. Manage and direct assembly teams.

### Auditory Lab (Profs. Heller and Grover)

Pittsburgh, Pennsylvania

ELECTRICAL AND COMPUTER ENGINEERING RESEARCH & DEVELOPMENT ENGINEER

May 2016 - May 2017

- Engineer mobile application intended to assist in teaching echolocation skills to visually impaired persons on an interdisciplinary team with the Psychology and ECE departments under Professors Heller and Grover.
- Provide back-end design for and administrate data collection server.

### Eberly Teaching Center

Pittsburgh, Pennsylvania

EBERLY TEACHING CENTER DEVELOPER

Sept. 2016 - Dec. 2016

- Design and implement programmatic online course tools with JavaScript and jQuery for the Open Learning Initiative.
- Light system administration work on a Debian Apache 2 system.

## Skills & Qualifications

SystemVerilog	FPGAs	ARM	Python	Reverse Engineering	Power Systems	National Electrical Code	AutoCAD / SolidWorks
C	UNIX Systems	x86	Java	Lab Equipment	Git	DOD Secret Clearance	Rapid Prototyping

## Projects & Extracurricular Activities

- **Embedded Capture the Flag** 2ND PLACE TEAM, IRON FLAG AWARD (JUNE 2018 - JULY 2018)  
Design & implement a secure video game console with a team part time over 8 weeks. Defend own design & attack other team's systems.
- **Build 18 Hardware Hackathon** BUILDER (JANUARY 2017)  
During a week-long Hardware Hackathon, design and implement a protocol for driving a 96 x 64 RGB LED Matrix via an FPGA in SystemVerilog. Use this display to show programmatically derived 3D animations.
- **Activities Board Technical Committee** CORE MEMBER & EXECUTIVE BOARD (2015 - PRESENT)  
Entirely student driven, as a member of the Executive Board, lead, plan and implement event production services for campus events from small events to well known concert performers, implementing complex 3-phase power systems, and high grade audio and lighting rigs.
- **CMU Explorers Club** MEMBER, HIKING CHAIR & TREASURER (2016)  
CMUX is an outdoors club dedicated to making outside more accessible, and encouraging others. Organize hikes as hiking chair.
- **Spring Carnival Committee** HEAD OF ELECTRICAL (2016 - PRESENT)  
Responsible for the power distribution and safety of all building organizations for Spring Carnival