

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

Selected Coursework

Operating Systems Design & Implementation	Structure & Design of Digital Systems	Fund. of Electrical Power Systems	Calculus I/II/III
Embedded Systems Software Engineering	Logic Design and Verification (current)	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 (CMUX)** 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