

Alexander D. Gotsis

SEEKING INTERNSHIP/COOP JUNE - DECEMBER 2019

11 Summit View, Goshen, NY 10924

☎ (845) 341-3978 | ✉ agotsis@andrew.cmu.edu | ✉ alexgotsis8@gmail.com | 🌐 www.agotsis.org | 📷 agotsis | 📺 adgotsis

Education

Carnegie Mellon University

Pittsburgh, Pennsylvania

B.S. IN ELECTRICAL AND COMPUTER ENGINEERING & M.S. IN ELECTRICAL AND COMPUTER ENGINEERING

Expected May 2019 and May 2020

- Overall GPA 3.61/4.00 as of September 2018
- Carnegie Institute of Technology Dean's List Fall 2015, Spring 2017, and Spring 2018

Selected Coursework

Operating Systems Design & Implementation Structure & Design of Digital Systems Advanced Storage Systems (curr.) Calculus I/II/III
Embedded Systems Software Engineering Logic Design and Verification (curr.) Real-Time Embedded Systems (curr.) 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 & Hobbies

SystemVerilog FPGAs ARM Python Realtime Embedded Power Systems AutoCAD / SolidWorks Climbing
UNIX Systems C / C++ x86 Git Lab Equipment DoD Secret Clearance Rapid Prototyping Hiking/Backpacking

Projects & Extracurriculars

- **UNIX-like Kernel from Scratch** OPERATING SYSTEMS DESIGN & IMPLEMENTATION (SPRING 2018)
Design & implement a small (14k loc) UNIX-like kernel with a partner over 8 weeks. Some features include kernel-level threads, user-level threads, condition variables, mutexes, readers-writers locks, and virtual memory management.
- **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 club dedicated to making outdoor activities more accessible. Organize hikes as Hiking Chair. Manage finances as Treasurer.