

Alexander D. Gotsis

SEEKING FULL-TIME EMPLOYMENT STARTING SUMMER 2020

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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

Logic Design and Verification (curr.)	Structure & Design of Digital Systems	Intro to Computer Architecture (Spring '19)	Physics I-II
Operating Systems Design & Impl.	Advanced Storage Systems (curr.)	Embedded Systems Software Engineering	Calculus I-III

Experience

NVIDIA Corporation

Santa Clara, CA

GPU RTL DESIGN INTERN

September 2019 - December 2019

- Contribute to GPU submodules on the GPU RTL Design team.

NVIDIA Corporation

Santa Clara, CA

CUDA SYSTEMS SOFTWARE INTERN

July 2019 - September 2019

- Work on the Unified Virtual Memory subsystem of the CUDA computing platform.

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 to assist in teaching echolocation skills to visually impaired persons on an interdisciplinary team.
- Provide back-end design for and administrate data collection server.

Skills & Hobbies

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

Projects & Extracurriculars

- **RTL Design/Verification Projects** LOGIC DESIGN & VERIFICATION - 18-341, FALL 2018
Design and implement optimized pipelined matrix multiply-accumulate, concurrent "NoC" packet router, and more in SystemVerilog.
- **UNIX-like Kernel from Scratch** OPERATING SYSTEMS DESIGN & IMPLEMENTATION - 15-410/605, 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.
- **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)
Direct and implement production services for campus events, including 3-phase power systems and professional audio and lighting rigs.
- **CMU Explorers Club (CMUX)** MEMBER (2015), HIKING CHAIR & TREASURER (2016-PRESENT)
CMUX is an club dedicated to making outdoor activities more accessible. Organize hikes as Hiking Chair. Manage finances as Treasurer.