

Alexander D. Gotsis

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Education

Carnegie Mellon University

M.S. IN ELECTRICAL AND COMPUTER ENGINEERING WITH UNIVERSITY HONORS

Pittsburgh, Pennsylvania

May 2020

B.S. IN ELECTRICAL AND COMPUTER ENGINEERING WITH UNIVERSITY HONORS

May 2019

- CIT Dean's List Fall 2015, Spring 2017, and Spring 2018, Senior Leadership Recognition, University Honors

Selected Coursework

Automated Lighting Maintenance Lighting Management Operating Systems Design & Impl. Calculus I/II/III
Logic Design and Verification Intro to Computer Architecture Structure & Design of Digital Systems Secure Coding

Experience

Activities Board Tech

Pittsburgh, PA

MASTER RIGGER, EXECUTIVE BOARD MEMBER

September 2015 - May 2020

- Direct & implement production services for events including 3-phase power systems, rigging, and professional audio & lighting.
- Realize 24 point rig with arena style rigging.

IATSE Local 3

Pittsburgh, PA

STAGEHAND

November 2016 - March 2020

- 300 hours with the union, as a general hand, steel rigger, and downrigger.
- Referred approximately 15 other students to the overhire list.

VMware

Palo Alto, California

MEMBER OF TECHNICAL STAFF 3 - VIRTUAL MACHINE MONITOR TEAM

May 2020 - December 2022

- Core member of subteam developing API for vendors to create virtual devices based on hardware capable of live-migration.
- Devise and implement method to use IOMMU to track DMA by hardware to VM main memory, allowing live-migration of virtual devices based on physical devices. Work was at all levels of the kernel and user components of virtualization.

NVIDIA

Santa Clara, California

GPU RTL DESIGN + VERIFICATION INTERN - CUDA UNIFIED VIRTUAL MEMORY SYSTEMS SOFTWARE INTERN

July 2019 - December 2019

- Perform bugfixes and improvements on the Unified Virtual Memory (UVM) Linux kernel module of the CUDA kernel-mode driver and its unit and performance tests. Implement and verify a new cross-platform performance test for the Copy Engine to guide development.

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.

Skills & Hobbies

Rigging Sound Consoles (Yamaha) Lighting Consoles Embedded FPGAs Climbing
MEWP Certification (Scissor and Boom) UNIX (Adv.) 3-Phase Power x86 Lab Equipment SystemVerilog

Projects & Extracurriculars

- **Pop Up Metro** MISCELLANEOUS CONSULTING (2021-PRESENT)
Pop Up Metro provides trials of transit systems with battery powered metro cars. Consult on projects for a battery charger and signal lights.
- **MIT Mystery Hunt 2023** PUZZLE AUTHOR, PUZZLE EDITOR, TECHNICAL TEAM (JAN 2022 - PRESENT)
Author, edit, and work on technical infrastructure of puzzlehunt to have at least 100 puzzles. Focus on backend & interactive components.
- **CMU Explorers Club (CMUX)** MEMBER (2015), HIKING CHAIR & TREASURER (2016-2020)
CMUX is an club dedicated to making outdoor activities more accessible. Organize hikes as Hiking Chair. Manage finances as Treasurer.
- **Spring Carnival Committee** HEAD OF ELECTRICAL (2016 - 2019)
Responsible for the power distribution and safety of all building organizations for Spring Carnival. Oversee implementation and inspection.