Andrew J. Plesniak

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA *December 2020*
Master of Science in Electrical and Computer Engineering
Specialized Coursework: Applied Machine Learning, Data Science, Software Engineering

University of Pittsburgh, Pittsburgh, PA *April 2019*
Bachelor of Science in Mechanical Engineering
summa cum laude (GPA: 3.9/4)
Specialized Coursework: Cyber-Physical Systems (IoT), Embedded System Design, Robotic Control

TECHNICAL SKILLS

Programming Languages: Python, C++, C, PHP, MATLAB
Software Engineering Tools: Git, Jira, Linux, hypervisors, virtual machines
Additional: OpenCV, MySQL, HTML, CSS, CAD/CAM, CNC machining, electronics

PROFESSIONAL EXPERIENCE

Honeywell (Aerospace - SATCOM), Phoenix, AZ *May 2019 -- August 2019*
Embedded Software Engineering Intern

- Led development of a core feature on a cyber-security critical product exceeding timeline predictions
- Engineered a new hypervisor software stack increasing virtual machine isolation
- Designed and implemented software and network architecture eliminating potential cyber vulnerabilities
- Utilized an Agile DevOps methodology to deliver software features and innovation at a high velocity

Mascaro Center for Sustainable Innovation, Pittsburgh, PA *January 2016 -- May 2019*
Research Assistant

- Drove the development of a machine learning based smart heart stent for emergency military use
- Devised a neural network approach to predicting spatial radiation signatures of ultra-high frequency antennas
- Created custom ultra-high frequency antenna designs and flexible printed circuit boards (PCBs)
- Headed project assessing new inertial measurement unit (IMU) technology for tracking real time motion

Eaton Corporation, Pittsburgh, PA *May 2017 -- August 2017*; *May 2018 -- August 2018*
Embedded Systems Engineering Intern (R&D)

- Automated testing procedures using Python drastically improving testing efficiency and accuracy
- Programmed, wired, and networked automatic switching controls for Amazon and Equinix datacenters
- Coded an application and user interface improving the usability of a laser engraver used to generate labels

ACADEMIC PROJECTS

HawkEye: Prototype of a Computer Vision Target Identification Tool *January 2019 -- May 2019*
Sponsored by the Marine Corps Forces Special Operations Command (MARSOC)

- Conceptualized and proposed a "google searchable video" tool for drone footage target identification
- Iteratively evaluated design, feasibility, and profitability by interviewing ~100 military and industry experts

Facial Identification Based Smart Door *September 2019 -- May 2019*

- Built a full working prototype of a door that will unlock for authorized users using a Raspberry Pi
- Optimized a Haar-Cascade, Neural Network, and Support Vector Machine approach for a low power system

LEADERSHIP

University of Pittsburgh Cheer Team, Captain *May 2016 -- May 2019*
NCAA Student-Athlete Advisory Committee, Elected Representative *September 2017 -- May 2019*
Engineering Student Council, Member *September 2015 -- May 2019*