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Anthony Calandra

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I'm a skilled and experienced software engineer with a year of industry experience and two years of team based engineering experience across multiple domains from software security, autonomous vehicles, embedded systems, and automotive infotainment.

EXPERIENCE:

Harman International Industries, Novi, MI – *Software Engineering Intern - Software Security*

May 2018 - December 2018, May 2018 - Present

- Threat modeled Harman software using failure mode effect analysis
- Developed a systems security analysis suite for Harman products utilizing extensive shell scripting and C language
- Gained substantial experience with QNX and embedded android operating systems and automotive infotainment
- Used confluence to document projects and generate development guides for Harman systems and solutions
- Used Elvis and JIRA software for issue tracking
- Utilized customer specification documents, to verify our systems utilized proper encryption on our databases.
- Submitted tickets for improper encryption and worked with engineers to choose an optimal encryption algorithm.

Dataspeed Incorporated, Rochester MI – *Drive-By-Wire Intern*

March 2018 - May 2018

- Developed CAN communication software using Robot Operating System(ROS)
- Tuned a PID controller for By-Wire steering
- Assisted in wiring and mounting electronics for the vehicles electrical systems

Oakland Robotics Association, Rochester MI – *President*

September 2017- December 2018

- Gained experience transforming competition design requirements into technical requirements and specifications for the Intelligent Ground Vehicle Competition
- Utilized Python with Linux OS and Robot Operating System middleware to implement GPS systems into an unmanned ground vehicle
- Utilized C++ and Robot Operating System to implement a software in an unmanned ground vehicle

HACKATHONS:

MHacks 9, Michigan university – *Project Air - C2's Best Hack for Air Traffic Control*

Project: Worked in a team of 4 to develop an air traffic controller simulation using a HTC Vive and Unity Game Engine, Firebase Database, and an Amazon Echo for voice control

Contribution:

- Wrote design documentation for C2's sponsor prize
- Developed c# scripts for a unity based virtual reality project

SpartaHacks, Michigan State University – *ClawBoi - TOP 10 Hack*

Project: A small scale robotic claw arm that was controlled via a gyroscope for spatial motion and a potentiometer for opening and closing the claw and was controlled using an Arduino microcontroller

Contributions:

- Designed and built the mechanical platform a small scale robotic arm
- Handled Wiring for the arms actuators

CWRUHacks, Case Western Reserve University – *VR Glove - Runner Up, Best Hardware Hack, Best STEM Education for Women, Best Startup Pitch*

Project: A pair of gloves that used 5 accelerometers(one on each finger) and a Arduino with a bluetooth shield sewn to each glove to track hand motion. These gloves were paired with HTC Vive wrist trackers to then translate the users hands into a VR world, we then utilized the VR gloves to create a VR game that used the gloves to allow for users to grab and throw objects.

Contributions:

- Wrote Arduino code for bluetooth communication
- Soldered connectors and Arduino shields for the project
- Handled wiring for accelerometers on a motion tracking glove

SKILLS:

Languages – *C, C++, Java, Python, HTML, CSS, JavaScript, SQL*

Operating Systems – *Windows 7 and 10, POSIX Linux, QNX, Embedded Android*

Skills – *Software and Systems Security, Threat Modeling, Front-End Web Development, Mobile Robotics, Microcontrollers, Databasing, Robot Operating Systems, Algorithms, Project Management, Wiring, Soldering, Fabrication*

EDUCATION:

Oakland University, Rochester MI – *B.S. Computer Science 3.41 GPA graduating December 2018*

Oakland University, Rochester MI – *M.S. Computer Science Admitted*

References Available upon request