

# Oswaldo A. Armas

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## Education

### Georgia Institute of Technology

May, 2019

#### B.Sc. Computer Science with Minor in Robotics

- Threads: Devices and Intelligence

**Relevant Courses:** Robotics, Machine Learning, Intro to AI, Robotics and Perception, Natural Language Processing

## Experience & Research

### Amazon, SDE Intern

Aug 2018 - Present

- Developing multiple prototypes of classification ML models, using semi-supervised learning, acoustic speech data, and PyTorch for classification
- Using AWS SageMaker to perform distributed training and deploy models as a service under Alexa Speech Recognition

### Microsoft, SWE Intern

May 2018 - Aug 2018

- Performance Oriented Congestion Control Prototype
- Developed Kernel implementation using online-learning, and gradient ascend to maximize sending rate of a network TCP/IP connection

### Robot Autonomy and Interactive Learning

#### Research Assistant

Aug 2017 - Present

- Developed a ROS module for robots to navigate to people by taking into human proxemics
- Studying robot navigation in unconstrained social environments by implementing a modified extended Social Force Model in order to have attractive human forces for the robot to navigate towards.

### Microsoft

#### Explore Intern

May 2017 - Aug 2017

- Designed spec requirements for command line tools to generate visual representations of captured GPU data
- Designed spec requirements for command line tools to get a screenshot of a captured video game frame
- Implemented command line tools for visualizing video game screenshot and GPU data

### The Home Depot

#### Developer Intern

Jan 2016 - Aug 2016

- Worked in the software as a service team writing automation scripts in python and bash.
- Reduced the time required for developers to deploy custom server builds from days to minutes by automating large parts of approval process

## Leadership

### Invention Studio Prototyping Instructor

Jan 2015 – Nov 2017

- Served as instructor to other students by providing guidance on machining techniques
- Aided students with conceptualization, design and productions of Capstone and research projects

### HackGT Operations

Nov 2015 – Nov 2017

- Ensured sponsor exposure through venue layout based on building requirements and sponsorship level.
- Negotiated with restaurants in order to secure food for over 800 attendees.

## Projects

### Alexa, Who?

- 2017 Big Red Hacks Best Use of AWS
- Used a Flask server, Facebook's graph API, and AWS Lambda to create a connection between Alexa and an external device to recognize friendly faces knocking at your door.

### Design Build Fly (DBF)

- Design (CAD) and Construction of several subsystems such as landing gears, drop rigs, and control surfaces
- Won 1<sup>st</sup> Report at AIAA DBF 2015 and 2016
- Won 3<sup>rd</sup> Overall for 2016 and 2<sup>nd</sup> for 2015

### FIRST Robotics Team 5329

- Team Co-Founder and President
- Obtained sponsorship from NASA, and Florida Power & Light for \$15,000

## Skills

- **Programming:** C, C++, Python, Java, MatLab
- **Software:** SolidWorks, AutoCAD, Autodesk Inventor, Visual Studio, Mathworks Simulink
- **Some Technologies:** ROS, Docker, PyTorch, Numpy, OpenCV, Flask, Pandas
- **Hardware Applications:** Control Systems, Numerical Methods, Embedded Systems, Microprocessor Programming
- **Instrumentation:** 3D Printing, Laser Cutting, Milling, 5-axis Water Jet, Soldering, basic CNC machining
- **Spoken Languages:** Spanish – Native, English – Fluent, Japanese – Conversational