Osvaldo 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

Microsoft

Software Engineering Intern **May 2017 - Aug 2017**

- Implementing a prototype of a performance-oriented congestion control algorithm called PCC Vivace, using online machine learning for TCP/IP.

Robot Autonomy and Interactive Learning

Research Assistant **Aug 2017 - Present**

- Designed and built a ROS module to approach people by accounting for personal space, map constraints, and the direction a person is facing.
- 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 an Agile/Extreme programming environment for the Software as a Service Team.
- Developed plug-ins and scripts using python and bash for server-build automation in order to reduce the time required to deploy an internal server from days to minutes.

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 1st Report at AIAA DBF 2015 and 2016
- Won 3rd Overall for 2016 and 2nd 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, NI-LabVIEW, MasterCAM
- **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