

Jason G. Villanueva

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Education

Massachusetts Institute of Technology

Cambridge, MA

B.S. IN COMPUTER SCIENCE AND ENGINEERING

2018

Experience

Open Source Community

The Internet

CONTRIBUTOR

2017-Present

- Rocket Console - Created an API for developers to access the SDK of the popular game, Rocket League, in order to dynamically add and remove plugins at runtime. Reverse engineered the Rocket League SDK (based on Unreal Engine 3) with public resources on the engine.
- [Flight Plugin](#) - Simulated aerodynamics (lift and drag) in the video game, Rocket League.
- [PushFish](#) - Actively developing a free and open source push notification system for Android using MQTT.
- and more...

MIT Aerospace Controls Laboratory

Cambridge, MA

LINCOLN LABORATORY UNDERGRADUATE RESEARCH AND INNOVATION SCHOLAR

2017-2018

- Researched under Professor How and Michael Everett how to improve odometry for autonomous robots. Improved sensor calibration procedures and fused sensor frames in existing filtering algorithms for use with Jackal robot.

Mobile Autonomous Systems Laboratory

Cambridge, MA

WEBMASTER, STAFF, AND CHAMPION

2018 & 2017

- Maintained and updated the 2018 course website (PHP, HTML, CSS), mentored teams, and gave a lecture on software development for the robot.
- Formed a championing team to compete in the 2017 robotics competition. Oversaw software attributes to the final robot.
- Implemented ROS with teammates as an alternative to the staff's microcontroller proxy.
- Created the CAD file and physical pieces for the elevator door collection mechanism with SolidWorks and laser printer technology.

American Prison Data Systems

Cambridge, MA

SOFTWARE ENGINEERING INTERN

2016

- Designed, tested, and implemented a Python script to automatically configure and secure Android tablets before shipment to correctional facilities in the United States.

MIT Space Propulsion Laboratory

Cambridge, MA

UNDERGRADUATE RESEARCHER

2015

- Fabricated multiple aluminum molds for Resorcinol Formaldehyde substrates using Solid Works and machine shop experience.
- Experimented with and found the most effective mold size to account for substrate shrinkage through multivariate regression models.

Balanced Living Scholarship

Cambridge, MA

DIRECTOR

2017

- Led a committee of MIT upperclassmen and Professors through several rounds of interviews in selecting prospective MIT freshman.
- Hosted the awards banquet and delegated tasks to peers for a successfully planned scholarship.

MIT Track & Field - STUDENT-ATHLETE, ASSISTANT DIRECTOR SEARCH COMMITTEE

Cambridge, MA 2014-2018

Skills

Languages Python, Rust, Java, C/C++, BASH, HTML, CSS, JavaScript, PHP, SQL, XML, \LaTeX , Spanish

Softwares ROS, OpenCV, gdb, Valgrind, SolidWorks, Apache2, Nginx, Node.js

Relevant Coursework

- Computer and Network Security
- Performance Engineering of Software Systems
- Interactive Music Systems
- Software Construction
- Deep Learning for Self-Driving Cars
- Design and Analysis of Algorithms
- Electronic Music Composition
- Computer Systems Engineering