

# Jason G. Villanueva

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## Education

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### Massachusetts Institute of Technology

Cambridge, MA

Bachelor of Science in Computer Science and Engineering

2018

## Experience

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### Prisms of Reality

San Francisco, CA

Senior Manim Developer

2023 – Present

- Produced math videos in Python, with Manim, to significantly improve students' comprehension and problem-solving skills.
- Collaborated with curriculum and pedagogy experts to tailor production to learning objectives and national educational standards.
- Thrived in a dynamic startup environment, consistently meeting tight deadlines and adapting to evolving project requirements.

### Concord

Los Angeles, CA

Fullstack Developer

2023

- Designed and developed a web-based chat application using Django, React, Websockets, and PostgreSQL, resulting in an intuitive and user-friendly interface for real-time communication.

### Open Source Community

The Internet

Contributor

2017 – Present

- [ManimCommunity](#) - Maintainer for the programmatic, Python animation library, [Manim](#).
- [Jet Club](#) - Learned Unreal Engine 4 (UE4) and created a free-to-play physics based car soccer [video](#) game for Linux with online multiplayer using a combination of C++ and UE4's Blueprint Visual Scripting language.
- [Flight Plugin](#) - Implemented aerodynamic effects (Lift/Drag) into the UE3 video game, Rocket League, using C++.
- [Rocket Console](#) - Created an API to dynamically add and remove plugins at runtime. Reverse engineered Rocket League with decompilation tools and memory scanners to create a custom SDK.
- [PushFish](#) - Developed an MQTT, push notification Android application in Kotlin.
- ... and more!

### Praava Health

Remote

Fullstack Developer - Independent Contractor

2021 – 2022

- Redesigned the clients website using UI/UX tools such as Figma and Miro.
- Implemented the website designs in WordPress using a myriad of plugins and some custom CSS/HTML/JS.

### Psychocandy

Remote

Fullstack Developer - Independent Contractor

2019 – 2020

- Created an eCommerce store with a VPS host, LAMP stack and WordPress in the backend for the client.
- Customized the website to the owner's preference using HTML, CSS, JavaScript and PHP.

### Mobile Autonomous Systems Laboratory

Cambridge, MA

Webmaster, Staff, and Champion

Winters 2017 & 2018

- Maintained the 2018 course website (PHP, HTML, CSS), mentored teams; gave a lecture on software design for robotics.
- Won the 2017 robotics competition. Implemented ROS for the microcontroller proxy and wrote the robots AI algorithms.

### MIT Aerospace Controls Laboratory

Cambridge, MA

Lincoln Laboratory Undergraduate Research and Innovation Scholar

2017 – 2018

- Experimented with sensor fusion and calibration procedures to improve odometry for autonomous ground robots.

### American Prison Data Systems

Cambridge, MA

Software Engineering Intern

Summer 2016

- Designed, tested, and implemented a Python script to configure multiple Android tablets in parallel with security firmware.

MIT Track & Field - Student-Athlete, Assistant Director Search Committee

Cambridge, MA 2014 – 2018

## Languages

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|--------------|----------|--------|--------------|-----------|
| • Python     | • Java   | • Rust | • MongoDB    | • CSS     |
| • JavaScript | • Kotlin | • C    | • MySQL      | • HTML    |
| • TypeScript | • PHP    | • C++  | • PostgreSQL | • Spanish |

## Relevant Coursework

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