

Zach Garcia

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EDUCATION

Cornell University, College of Engineering

Ithaca, NY

Major: Computer Science & Electrical and Computer Engineering

Expected Dec 2024

Minor: Robotics

GPA: 4.10/4.30 (Dean's List)

Relevant Courses: Machine Learning, Robot Learning, Introduction to the Analysis of Algorithms, Functional Programming, Object-Oriented Programming and Data Structures, Computer System Organization & Programming

PROFESSIONAL EXPERIENCE

Google Cloud Storage

Sunnyvale, CA

SWE Intern

May. 2022 – August 2022

- Gained experience with Google's developer workflow and collaborating with version control
- Improved development velocity and reliability by integrating code with an efficient C++ RPC framework
- Upgraded a test to be hermetic and deterministic to reduce runtime by 60% and eliminate flakiness

Space Systems Design Studio

Ithaca, NY

Alpha CubeSat Flight Software Engineer

Sept. 2022 – Present

- Wrote robust software for CubeSat operations in space
- Tested and repaired IMU and Camera report managers after State Field Registry addition
- Added the capability to invalidate erroneous button readings to improve deployment detection

Cornell Rocketry Team

Ithaca, NY

Software Engineer

Sept. 2022 – Present

- Developed an algorithm to track the rocket with a directional antenna during flight
- Implemented LoRa communications that received packets from 2 miles away
- Added Reed-Solomon forward error correction to improve packet reception

Tesla

Pittsburgh, PA

Tesla Advisor

Dec. 2020 – July 2021

- Educated clients about the benefits of electric vehicles to capture leads on the sales floor
- Delivered 50+ vehicles and detailed 100+ vehicles

LEADERSHIP EXPERIENCE

Amateur Radio Club

Ithaca, NY

President

Sept. 2021 – Present

- Spearheaded recruitment, leading to an increase from 6 to 15 members
- Learned about SDRs and modulation techniques using GNU Radio for the AFRL SDR Challenge
- Designed and built a payload for a high-altitude balloon launch incorporating radio communications
- Soldered together a battery-powered radio receiver

Cornell University Physics Department

Ithaca, NY

Teaching Assistant

Jan. 2022 – May 2022

- Taught 25+ Physics 1112 students in discussion section
- Advised students in navigating engineering resources and obtaining academic support

ACTIVITIES, SKILLS, AND AWARDS

Additional Activities: Splash! at Cornell, Science National Honor Society, Global Leadership Club

Skills: Distributed Systems, Java, C++, Python, Go

Interests: Rock Climbing, biking, salsa dance, playing tuba, HAM Radio, astrophotography