

# Rudy Good

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## EDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly)

**Bachelor of Science Degree in Computer Science** Expected Graduation 2029 GPA: N/A

**Relevant Coursework:** CSC 202 (in progress), CSC 123 (equivalent), CSC 101 (equivalent), CS 3-4 (HS webdev course)

## SKILLS

**Programming Languages:** Java, Python, Javascript, C++

**Software Tools:** Git, React, REST API, JSON, Firebase, Vercel

## PROGRAMMING PROJECTS

<https://stats.patribots.org/> , **Data Analysis/Visualization Website for First Robotics Competition Team 4738 (Example Event Code 2025CACC)**

Languages and Tools Utilized: Javascript, Firebase Real Time Database, React, Vercel

- Utilized Firebase's RealTimeDatabase to sort and store data from a data submission app built the previous year, using "event codes" to separate data from different competitions so we could look back on them
- Took the data from firebase and used javascript to analyze the data and create usable metrics to compare the performance of different robotics teams throughout their matches
- Worked with other members of my team using React to create different pages in which you can view teams performances in various ways (tables, barcharts, search function)
- Taught younger team members the inner workings of the backend so that when I graduated they could continue to maintain the site and use it for competitions

### Better Showdown API

Languages and Tools Utilized: Javascript, Firebase Firestore, Expressjs, REST API

- Created a REST API in Expressjs to turn an essentially useless API for a pokemon battling simulator into a useful tool that allows you to get pokemon usage stats and user info
- Utilized the original API to get things like matchIDs and sort through the logs from match IDs to obtain useful information and show it to the user
- Eventually realized the amount of calls the project was making to the original API were unsustainable so created a firebase firestore to cache data
- Currently in the process of converting the whole project into using firestore except when updating the firestore with calls to the original API

### First Robotics Competition Team 4738's 2024 and 2025 Robots

Languages and Tools Utilized: Java, WPILIB, Advantage Scope, AGILE through Github issues/projects • Worked on code for vision, teleoperated controls, and autonomous movement for a robot through WPILIB for two years (2023 was my first year so I didn't contribute much)

- Worked on a lot of math relating to the comparison of positions and the movement of the robot, along with physics for the 2024 robot that had to shoot foam projectiles extremely accurately
- Collaborated with an entire team of programmers working on the same project by having different people work on different issues through multitudes of github issues and branches
- Taught younger programmers the basics of java and robot code, and helped them work on different projects

and subsystems by assigning them work using a github project in the AGILE system (2025 only)