

# Satvik Reddy

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I am a high school student from San Mateo, California pursuing a career in engineering.

## Work Experience

### Aragon Robotics Team

August 2020 - Present

*Team Captain* May 2022 - May 2023

- Led and managed the approx. 40-member team, alongside my co-captain, through the summer, fall, and spring seasons
- Managed and facilitated a training program that taught new members skills in fabrication and construction, CAD, and programming
- Managed and facilitated the design and implementation of a competition robot, which competed at two regional competitions and the world championships

*Software Lead* August 2021 - May 2022

- Worked on computer vision and autonomous code for our robot during the fall off-season
- Managed our codebase and wrote the majority of the code for our 2022 competition robot

*Programmer* August 2020 - August 2021

- Worked with 5 other programmers on the 2021 code-base

### LightBeam.ai

June 2022 - July 2022

*Intern*

- Wrote software in Python to automatically scrape thousands of images from various sources to be used in training and testing machine learning models
- Containerized my software using Docker and deployed it on AWS to run it at scale

### pSolv

June 2021 - July 2021

*Intern*

- Integrated third-party identity management systems including LDAP, Active Directory, and OIDC, into their backend
- Wrote bindings in Python for a REST API and CLI

### theCoderSchool

June 2021 - July 2021

*Volunteer*

- Completed 60 hours of volunteer work as a teaching assistant at a Python summer camp, teaching middle schoolers how to code

## Skills

### Competencies

- Leadership, product management, team management, software design, software implementation, electrical systems implementation

### Technologies

- Programming Languages: Python, Rust, Go, Typescript, Javascript, Java, C, C++, x86 Assembly, SQL
- Databases: PostgreSQL, MongoDB, SQLite
- Cloud/DevOps: AWS EC2, S3, RDS, Google Firebase, Docker, Git, Github, Linux, Nginx, RabbitMQ
- Frameworks/Libraries/Protocols: Flask, Express.js, Next.js, React, OpenGL, REST, WebSockets
- Tools: VSCode, Vim, Google Office Suite (docs, slides, sheets, forms, etc.), MS Office

## Projects

### RC

June 2022 - August 2022

*Rust, x86 Assembly, Linux*

- Designed a C-like programming language with types, pointers, arrays, loops, conditionals, functions, access to syscalls, a standard library, and more
- Designed and implemented a three-stage compiler for said language in Rust, which compiled code into x86-64 assembly with Linux as the target OS

### LCGE

April 2021 - May 2021

*C, OpenGL, 2D Graphics*

- Designed and implemented a lightweight 2D game engine in C, using OpenGL to render graphics
- Wrote code to create a window, render shapes and images, maintain an FPS, read mouse and keyboard input, load fonts, render text, and more

### Liveassist

June 2021 - November 2021

*Microservices, Go, Next.js, React, Typescript, WebSockets, RabbitMQ, PostgreSQL, MongoDB*

- Designed and implemented a knowledge-sharing platform, which allows users to discuss questions over an easy-to-use real-time messaging interface
- Built a set of microservices run the platform, using RabbitMQ to facilitate interservice communication, implementing each service in Go, and storing data in PostgreSQL and MongoDB
- Deployed the backend to AWS, using docker to deploy each individual service, and Nginx to handle networking
- Built and deployed a frontend written using React and Next.js

### Homework Help

October 2020 - November 2020

*Node.js, Next.js, React, Typescript, MongoDB, AWS S3*

- Designed and implemented a platform for students to get help with homework assignments, with features including asking and answering questions, uploading images
- Built a frontend using React and Next.js, and implemented a backend service using Node.js and Express.js, using MongoDB to store data and facilitate user search queries, and

## Education

### Aragon High School

August 2020 - Anticipated Graduation: May 2024

- **GPA** 4.0 unweighted, 4.29 weighted
- **Relevant Coursework** AP Calculus BC, AP Physics 1, AP Computer Science A, AP English Language, AP U.S. History, Spanish 4 Honors, Engineering Technology Advanced