Satvik Reddy

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I am a full stack web developer and High-schooler from the San Francisco Bay Area with six years of programming experience.

Education

Aragon High school

2020 – current

Skills

Programming Languages

Fluent In: Python, TypeScript, JavaScript, Java, Go, HTML/CSS, Bash

Proficient In: C++, C, SQL, and PowerShell

Technologies

AWS EC2, S3, Elastic Beanstalk, RDS, Firebase, Git, Docker, docker-compose, PostgreSQL, SQLite, MongoDB, Nginx, Windows, Linux, Unix, Raspberry Pi, IDEs/Debuggers, Visual Studio Code, Vim

Experience/Events

FRC Robotics Team | Programmer

August 2020 – Current

I have been a programmer on the Aragon High School FRC Robotics Team for about 8 months. I work on a team of six programmers, and we use **Java** and the WPILib library to program the Robot. We also collaborate closely with a team of electrical engineers as a part of our work.

HackDefy Hackathon | Participant

August 2020 | Online

At the HackDefy Hackathon, my team and I created a website that would help students with limited educational resources with spelling and handwriting. Our website used **Flask** webserver for the backend, and **JavaScript** and **CSS** for the frontend. We built and trained a machine learning model using **TensorFlow** to convert students' writing to text.

DVHacks ||| | Participant

March 2021 | Online

At the Third Dougherty Valley Hackathon, my team and I built an automatic music transcriber to help beginner music students learn music. Our solution allows users to upload music in the mp3 format to a

website, where it would get converted to the MIDI file format using a **Pytorch based** machine learning model and then saved as a PDF file file in an **AWS S3** bucket.

Projects

Homework Help

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

This project is a platform made for students to get help on homework and assignments. Students can share questions, answer questions, and give feedback. The backend is a REST API built with Node.js, Express.js, and Typescript. I used MongoDB to store data, and Redis to store JWT tokens. The frontend was built with React, and Next.js. The server and the database were hosted on an AWS EC2 instance, the Next.js website was hosted on Vercel, and user uploaded images were stored on AWS S3. GitHub Link: https://github.com/SatvikR/homework-help

Cyan DB

Go, WebSockets

Cyan DB is a persistent key-value database inspired by Redis, written in Go. The database uses algorithms I wrote to serialize, deserialize, query, and insert data. The server receives database commands in the form of JSON objects sent over WebSockets. I also wrote an interactive shell that serves as a client for the database. GitHub Link: https://github.com/SatvikR/cyandb

LCGE

C, OpenGL, 2D Graphics

LCGE is an open-source, lightweight 2D game engine written in C. I used the OpenGL graphics API to render 2D graphics. LCGE can create a window, maintain an FPS, render 2D rectangles, render 2D images, render 2D lines, get keyboard input, get mouse input, load fonts, and render text. LCGE is distributed as a shared library and is compatible with windows, macOS, and Linux. GitHub link: https://github.com/SatvikR/LCGE

More projects available on my GitHub

Personal Achievements

- Showcased my projects to a group of executives, including the CTO, at Macy's Tech
- Identified as a Top Coder in the 2021 national coding competition organized by the Coder School
- Auditioned for and joined the Jazz Ensemble at my high school
- Obtained a 1300 rating in Chess
- Obtained a 1200 USATT (USA Table Tennis) rating
- Received second degree black belt in Taekwondo
- Solved a Rubik's cube in under 15 seconds in an official competition (My WCA Profile)

Other Fun Activities/Interests

Music, Video Gaming, Chess, Table Tennis, and Technology in general.