

Sairaaj Surve

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Skills

Languages: - JavaScript, Python, TypeScript, C++, C, C#, Java, SQL, HTML, CSS, YAML, Markdown.
Tech/Libraries: - MongoDB, Neo4j, Redis, REST, GraphQL, Docker, Webhooks, Kafka, RabbitMQ, MQTT, Nginx, JWT, SwaggerUI, Webpacks, Sympy, Scipy, Numpy, Matplotlib, Cheerio, Twilio, Qiskit
Coursework: - Theory of Computation, Data Structures, Analysis of Algorithms, Advanced Data Structures

Projects

Scientific Python Projects: Numerical solutions to several physics problems using Python.

Quantum Circuits: Implementations of various quantum circuits/algorithms using Qiskit and Q#.

Vedic Maths Game- CDAC (2021-2023): A web-based game for self-learning Vedic Maths. Contributed on the backend written in TypeScript using JWT, Bcrypt, Mongoose (MongoDB), Express and Frontend canvas animations(P5js).

Food Order System- Microservice (2021-2022): Backend written in JavaScript using JWT, Bcrypt, Mongoose (MongoDB), Express, Amqplib (RMQ). RabbitMQ used to implement message queue. Nginx used to forward proxy. Containerized using Docker.

GUI- CanSat (2021-2022): Website written in JavaScript, HTML, CSS. Backend written in JavaScript using Mqtt, Socket.io, Express, Axios, Serialport. Data is represented on frontend using Chart.js, Vis.js, Leaflet, P5js and published on MQTT.

Experience

Backend Developer Intern at Haspr (2021-2022): Contributed in making a tracking device using WebSockets. Implemented geographical indexing to find location using MongoDB, created and maintained an API.

Coding Head (2022-2023) and Coding Team Member (2021-2022) at DJS Arya: Responsible for leading a team which developed a web-based GUI for representing the data collected by the canister satellite developed by the team and making the Design Review presentations.

Junior Mentor at DJ-InitAI (2022-2023): Working on research oriented project, conducting lectures related to ML, maintained the backend of the club's website.

Certifications

Python3 Programming Specialization (2021-2022):

<https://www.coursera.org/account/accomplishments/specialization/certificate/CJBSDUK5RCG6>

Introduction to Quantum Information (2021-2022):

<https://www.coursera.org/account/accomplishments/certificate/MUN29BX53HGU>

Computers, Waves, Simulations: A Practical Introduction to Numerical Methods using Python:

<https://www.coursera.org/account/accomplishments/certificate/E8MMTS3WXVS4>

IBM Quantum Fall Challenge Advanced (2022):

<https://www.credly.com/go/5ZuhX8Oh>

Education

Dwarkadas Jivanlal Sanghavi College of Engineering - IT (2020-2024) - 9.3 (CGPA)

HSC (2020) - 88.77 %

SSC (2018) - 93 %

Hobbies

Guitar, Art History and Video Game Speedrunning