

Aviral Rana

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Education

Graphic Era University

B.Tech. in Computer Science and Engineering | CGPA : 9.40/10

Dehradun, India

June 2019 – June 2023

Coursework

Data Structures, Algorithms, OOPS, Operating Systems, Database Management Systems, Computer Networks.

Work Experience

Juleo Gurugram, India

Software Development Engineer

December 2023 - Present

- Currently working as a Software Development Engineer in the **Backend** team, driving the development of pivotal backend services that play a key role in shaping and advancing Juleo as a product.
- Developing modules for efficient data retrieval from **DynamoDB** and transforming it into structured JSON format.
- The module serves as a critical middleware, seamlessly facilitating data flow to the frontend for optimal rendering.
- Utilizing **Go-lang** and **Python** as primary tech, shaping product evolution seamlessly.

Amazon Bangalore, India

Software Development Engineer Intern

January 2023 - June 2023

- Collaborated with the International Expansion (IX) team to successfully launch a novel Home Tab experience of **Amazon Music** for **Android Automotive** clients by migrating the old home experience to a newer architecture.
- Developed **front-end** network calls module in Kotlin and contributed to **back-end** data processing **API** in Java.
- Orchestrated the deployment of a robust **CI/CD** pipeline, currently utilized by the **IX** team for experimentation, testing and feature development purposes.
- Implemented new Home Tab support for **Navigation Apps**, facilitating seamless integration with Amazon Music.
- Spearheaded the development of a personalised widget, which was successfully launched to production.

Technical Skills

Languages: Go, C++/C, Java, Python, Javascript, Typescript, SQL, HTML/CSS.

Technologies/Frameworks: ReactJS, TailwindCSS, Junit, Mockito, Flask, Gin, MySQL, DynamoDB, NodeJS.


Projects

Personal Portfolio Website | *ReactJS, TypeScript, JavaScript, TailwindCSS* |  Github | Live |

- Innovated a Discord styled personal portfolio website using **ReactJS** and **TailwindCSS**.
- Decoupled data dependency for UI elements by creating a **Config driven UI** enabling easy updates to the website.
- Developed an engaging user experience using modern design principles within a responsive single-page application(SPA).

Visualizing Path Finding Algorithms | *JavaScript, HTML, CSS* |  Github | Live |

- Developed simulation of **Shortest-path finding** algorithms using **JavaScript**.
- Implemented two graph algorithms: Dijkstra's and A-star. Implemented Randomized DFS for maze generation.
- Expanded the project scope by developing a **reverse snake** game that made use of path-finding algorithms for snake.

MNIST Handwritten Digit Recognition | *NodeJS, JavaScript, TailwindCSS, HTML* |  Github | Live |

- Developed a web UI for identification and prediction of hand-drawn digits. Streamlined the process by removing **back-end dependency** of the model and **shifting the computation** to front-end, improving overall performance.
- Trained a CNN model that had an accuracy of **99.74%** and used it to identify digits drawn in the UI.
- Created a **3D visualization** of the CNN model that is used under the hood for digit recognition using **Three.js**.

Achievements

Leetcode | **Knight : Max Rating 2019** | <https://leetcode.com/aviral19rana/>

- Secured **Global rank 630 out of 16000+** participants in Leetcode Biweekly contest 86.

CodeChef | **5 Stars : Max Rating 2105** | <https://www.codechef.com/users/aviral19>

- Secured **Global rank 44** in CodeChef Starters 7 and **Global rank 60** in CodeChef Starters 31.

Codeforces | **Expert : Max Rating 1618** | <https://codeforces.com/profile/aviral10>

- Secured **Global rank 429 out of 15000+** participants in Educational Codeforces Round 129.