

# 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

### Adobe

Noida, India

Technical Support Engineer

August 2023

- Reduced 80% of manual effort of business owners and managers by **automating a task** of fetching business data and generating case-review presentations automatically along with elaborated charts.
- Developed the application in **Python** and deployed it on company's server to be used internally by managers.
- Significantly **reduced query resolution time** for GSD team as measured by increased first-call-resolution (FCR) rate of service desk queries by developing a chatbot that helps in narrowing down the search space of FCR queries.

### 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:** C++/C, Java, Kotlin, Python, JavaScript, TypeScript, SQL, HTML/CSS.

**Technologies/Frameworks:** ReactJS, Amazon CloudWatch, Amazon Lambda, Android, Junit, Mockito, Flask, ExpressJS, ThreeJS, MySQL, MongoDB, 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.