Aviral Rana

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Education

Graphic Era University   **Dehradun, India**
B.Tech. in Computer Science and Engineering | CGPA : 9.40/10   *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 Developer 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 and contributed to the development of the **back-end** data processing layer.
- 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: Java, Kotlin, C/C++, Python, JavaScript, HTML/CSS.
Technologies/Frameworks: Amazon CloudWatch, Android, Junit, Mockito, Flask, ThreeJS, MySQL, NodeJS.

Projects

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 the **back-end dependency** of the model and **shifting the computation** to the 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.

StopStalk | *https://www.stopstalk.com/user/profile/aviral10*

- Solved **1600+** algorithmic problems over various online coding platforms.