SAUMYA CHAUDHARY

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SUMMARY

First year Graduate student at University of Illinois Chicago, specializing in software engineering, problem solving skills and machine learning. Skilled in Python for backend and data analytics. Seeking opportunities to innovate, collaborate, and contribute to the success of dynamic organizations.

TECHNICAL SKILLS

Programming Languages: Python, C#, SQL, C++, R
Libraries & Frameworks: NumPy, Pandas, Scitlearn, Matplotlib, Keras, TensorFlow, OpenCV, PyTorch, REST APIs, Spark
Tools & Platforms: Docker, Gitlab, GitHub, Postman, MySQL, Linux, TensorBoard, MongoDB

EXPERIENCE

Software Engineering Intern at Swastika Investmart Ltd *Indore, India* **January 2024 – July 2024**

- **Stock Pages Backend Development** – Engineered the backend interface for a stocks information page on the Swastika Investmart website using Python with Flask REST API calls. APIs fetch data from a MongoDB database that undergoes nightly updates using cron.
- The project is deployed using Docker, ensuring daily insertion of about 3,000 stocks, and the API response is converted to HTTPS with NGINX service for reverse proxy.
- **Customer Onboarding Email Sequence -** Revamped the emails sent during customer acquisition. This included fixing the issues with the 20 templates and optimizing 400 lines of C# code, thus providing a better onboarding experience and a 3% reduction in onboarding time.
- **Research Calls Impact -** Analyzed trade calls given by research team comparing current and past trades for about 30 stocks daily. Developed SQL procedures to fetch data and automated C# APIs to email Excel reports, improving decision-making speed by 15%.

Research Intern at Space Application Center, ISRO *Ahmedabad, India* **June 2023 - August 2023**

- **Reconstruction of Blue Band of Image using GANs -** Artificially regenerate the blue band around 1 million images using red and green and near the infra-red image of the same scene, solving the blue band detection problem in satellite images.
- Performed a comprehensive analysis of existing methods, leading to the development of custom GAN from scratch using TensorFlow and Keras. Trained it for around 500 epochs and obtained 94% accuracy, surpassing previously available solutions.
- The GAN model consisted of Dense block and U-Net architecture. Performance was rigorously evaluated quantitatively and qualitatively, showing a significant improvement over the pix2pix model in accuracy and image quality.

EDUCATION

University of Illinois *Chicago, United States* August 2024
MS in Computer Science
Medi-Caps University Indore, *India* August 2020 – June 2024
Bachelor of Technology in Computer Science GPA: 3.70
Carmel Convent Sr. Sec. School *Neemuch, India* March 2019 - March 2020
Class 12 CBSE - 95%
Carmel Convent Sr. Sec. School Neemuch, India March 2017 - March 2018
Class 10 CBSE - 93%

PROJECTS

Traffic Sign Classification System October 2023

- **Tools & Technologies:** Jupyter Notebook, Kaggle
- **Description:** This classification system uses the power of Convolutional Neural Network (CNN) to classify traffic signs into 43 distinct classes using the German Traffic Sign Recognition Benchmark dataset. The model was trained and fine-tuned to accomplish an accuracy of 93%.

Analysis of Factors Affecting House Price January 2023

- **Tools & Technologies:** Jupyter Notebook, Kaggle
- **Description:** Took a dataset from Kaggle and did a regression analysis on the data while checking OLS assumptions and multi-collinearity. The regression analysis gave an R-squared value of 0.837, thus indicating that the model can predict house prices with an accuracy of 83%.

EXTRA CURRICULAR ACTIVITIES

Medi-Caps Incubation and Innovation Cell January 2021 – December 2022

- Assistant Head of Marketing and Management - Overseeing the Incubation Center's day-to-day operation and the cell's specific initiatives. Conducted around 10 innovation workshops.
- Organised and facilitated the events performed by the group. Make sure the event reaches the maximum audience by marketing it across social media platforms.