TUSHAR SAXENA

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Education

VIT Bhopal University 8.40
Bachelor of Technology in Computer Science and Engineering *Oct 2022 - Present*

Summary

Highly skilled Computer Science and Engineering student at VIT Bhopal University with a strong foundation in data analysis, machine learning, and software development. Proven ability to process large datasets (100,000+ records) and extract actionable insights, leading to a 20% boost in operational efficiency.

Technical Skills

Core Skills: Predictive Modeling, Clustering Models, Data Modeling, Natural Language Processing (NLP), Artificial Neural Networks (ANN), Convolutional Neural Networks (CNN), Data Mining

Languages: Java, Python, MySQL

Techniques: Statistical Analysis, Machine Learning, Data Visualization

Platforms: AWS, SalesForce, Google Cloud Platform

Developer Tools: GitHub, Keras, Pytorch, Docker

Projects

LSTM-Based CCTV Crime Prediction Model| *OpenCV, TensorFlow, Keras, Streamlit* Jan - April 2025

- Developed an LSTM-based model using TensorFlow and OpenCV to analyze 10K+ CCTV frames, achieving 85% accuracy and 0.87 F1 score for crime prediction.
- Achieved 85% crime detection accuracy and an F1 score of 0.87.
- Deployed the model via Streamlit for real-time video analysis with 18% reduction in false positives.
- Achievements: Delivered a robust model with an F1 score of 0.87, outperforming traditional methods by 30% in predictive accuracy and enabling scalable real-time crime detection.

Stock Analysis Based on Social Media Sentiment| *BeautifulSoup, Scrapy, PRAW, TextBlob* Oct - Dec 2024

- Developed a predictive ML model analyzing sentiment from 2,000+ Reddit posts using NLP.
- Achieved 75% precision in forecasting stock movements and improved sentiment precision by 15% over benchmarks. Processed unstructured text data using TF-IDF vectorization and sentiment scoring(TextBlob).
- Built a predictive model achieving 75% precision and 15% improvement over benchmark sentiment models.
- Achievements: Provided actionable insights with detailed evaluation metrics (accuracy, precision, recall) and enhanced sentiment prediction accuracy by 15%.

Extracurricular Activities

Summer of Bitcoin 2024 | *Participant*

- Selected from a competitive pool of students globally to contribute to open-source Bitcoin protocol projects
- Worked on improving scalability and privacy features of Bitcoin Core through Python contributions.
- Gained hands-on experience with decentralized technologies and open-source collaboration

Certifications

IBM: Blockchain Developer

ETHNUS: Salesforce Administration

University of Michigan: Applied Machine Learning

Interests & Hobbies

Exploring cloud tools like **AWS** and applying them in personal tech projects

Coding in **Python** and **Java** to build projects, models, and automation scripts

Learning and experimenting with **machine learning** concepts through real-life datasets

Reading articles, watching documentaries, and participating in online coding events