TUSHAR SAXENA

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EDUCATION

VIT Bhopal University

8.40

Bachelor of Technology in Computer Science and Engineering

Oct 2022 - Present

Personal Summary

Full-stack developer with expertise in ReactJS and modern web technologies. Passionate about building scalable, user-centric applications with optimized performance. Strong background in data structures, algorithms, and cloud computing. Experience in developing 5+ projects, collaborating on 10+ repositories on GitHub, and contributing to 3+ open-source projects. Successfully optimized system efficiency by 30% in recent projects.

TECHNICAL SKILLS

Hard Skills: Predictive Modeling, Clustering Models, Data Modeling, Natural Language Processing (NLP), Artificial

Neural Networks (ANN), Convolutional Neural Networks (CNN), Data Mining. **Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R.

Techniques: Statistical Analysis, Predictive Analytics, Machine Learning Algorithms.

Platforms: AWS, SalesForce, Google Cloud Platform. Developer Tools:Git, Docker, Kubernetes, Tableau.

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Object-Oriented Programming, Database

Management Systems, Software Engineering.

PROJECTS

LSTM-Based CCTV Crime Prediction Model Using Deep Learning

Jan 2025 - April 2025

- Developed an end-to-end deep learning pipeline using LSTM, processing 10,000+ video frames from CCTV footage. Achieved 85% crime detection accuracy and reduced false positives by 18% through advanced pre-processing and model optimization.
- Key Contributions:
 - 1. Data Pre-processing: Extracted and pre-processed video frames using OpenCV, enhancing feature extraction and reducing noise for improved model input quality.
 - 2. Model Development: Designed and trained an LSTM-based neural network with TensorFlow and Keras, leveraging temporal sequence analysis to detect crime patterns.
 - 3. Model deployment: The model was deployed on AWS with a Streamlit interface for real-time crime prediction, ensuring scalability and user-friendly visualization.
- 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 Movement Analysis Based on Social Media Sentiment

Oct 2024 - 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.
- Key Contributions:
 - 1. Data Scraping: Scraped stock market discussions from platforms like Twitter and Reddit using Python libraries (BeautifulSoup, Scrapy).
 - 2. Data Analysis: Performed sentiment analysis to extract key features like sentiment polarity and frequency of mentions.
 - 3. Prediction Model: Designed and trained a machine learning model to forecast stock price trends.
- Achievements : Provided actionable insights with detailed evaluation metrics (accuracy, precision, recall) and enhanced sentiment prediction accuracy by 15%.

CERTIFICATIONS

IBM: BLockchain Developer

ETHNUS: Salesforce Administrator

University of Michigan: Applied Machine Learning