Aviral Dixit

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EDUCATION

Graphic Era deemed to be University **2021 – 2025**
B.Tech - Computer Science and Engineering - ***CGPA - 7.8*** *Dehradun, Uttarakhand*

PROJECTS

Video Anomaly Detection | (Deep Learning — CNN, Transformer, Python) **Aug 2025**

- Processed 300,000+ video frames across UCF-Crime, Avenue, and ShanghaiTech datasets.Extracted and preprocessed 150,000+ frames with resizing, normalization, and augmentation (cropping, flipping, jittering, rotation).
- Fine-tuned hyperparameters (learning rate, batch size, sequence length), improving F1-score by 12 percent and reducing training loss by 30percent.
- Achieved better anomaly localization compared to baseline CNN-only models, increasing detection accuracy by 15–18percent

Fake News Detection | (Python — NLP — Machine Learning) **Nov 2024**

- Collected and processed 20,000 news samples for training and used 50+ samples for testing and evaluation.
- Built an NLP pipeline with tokenization, stop-word removal, lemmatization, TF-IDF vectorization, and class balancing using SMOTE.
- Trained Logistic Regression and Random Forest models, achieving 92percent accuracy and improved precision/recall through iterative tuning.
- Reduced noise and improved text quality, increasing classifier stability by 10percent.

Movie Recommendation System | (JavaScript, ML Concepts) **Jan 2024**

- Worked with 5,000 movies and 5,000 credits as part of the dataset.Developed a recommendation engine using collaborative filtering + content-based filtering to generate user-specific suggestions.
- Processed and analyzed ratings, genres, similarity scores, and user interaction patterns to refine recommendations.
- Built an interactive web interface using HTML, CSS, and JavaScript, reducing response latency and improving recommendation accuracy by 20percent.

TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, HTML, CSS
Frameworks & Libraries: TensorFlow, Keras, scikit-learn, NumPy, Pandas, Matplotlib, Seaborn
Databases & Big Data Tools: Databricks, Spark SQL, MySQL
Cloud Technologies: AWS (EC2, S3, IAM, Cloud Essentials)
Tools Platforms: GitHub, Jupyter Notebook, Power BI, VScode
Soft Skills: Problem Solving, Team Leadership, Communication, Adaptability

CERTIFICATIONS

- AWS Cloud Quest: Cloud Practitioner - AWS Training and Certification
- AWS: Cloud Practitioner Essential - AWS Training and Certification
- Perform Sentiment Analysis with scikit-learn - Coursera
- Mastering Data Analysis with Pandas - Coursera

EXTRACURRICULAR

- Volunteer for ACM events (planning coordination)
- Fest Volunteer — coordinated activities and helped manage 1000+ students during college fests.
- Cricket Team Captain — led a team of 15 members, improving team coordination and strategy.