ABHAY TIWARI

AI ENGINEER

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GitHub | LinkedIn | Portfolio

SUMMARY

Motivated and results-driven AI Specialist Intern with expertise in Artificial Intelligence and Machine Learning. Skilled in developing and optimizing machine learning models, data preprocessing, and deploying AI solutions for real-world applications. Proficient in supervised and unsupervised learning, natural language processing (NLP), and deep learning frameworks like TensorFlow and PyTorch. Adept at feature engineering, model evaluation, and performance tuning. Passionate about leveraging AI to solve complex problems and drive innovation. Strong analytical mindset with a focus on research, automation, and scalable AI solutions.

TECHNICAL SKILLS

Predictive Modeling
Machine Learning Algorithms
Scikit-learn
Statistical Analysis
Deep Learning Algorithms
TensorFlow, PyTorch
Natural Language Processing
Docker, RESTful API's
Flask & Flask API

PROJECTS

SMS Spam Detection

- Developed an SMS spam detection web application using Python, Flask, and machine learning techniques, incorporating text preprocessing and TF-IDF vectorization. Evaluated multiple classifiers, with Random Forest emerging as the best performing model (accuracy: 0.972921, precision: 0.982456).
- Deployed the solution with a user-friendly interface built in HTML/CSS, enabling real-time predictions and enhancing user experience through efficient spam identification.

Fraud Detection using Autoencoders

- Developed an autoencoder-based fraud detection system with advanced feature engineering (temporal, geospatial, rolling statistics), achieving a Training Loss of 0.2362 and Validation Loss of 0.1302.
- Leveraged reconstruction error (threshold: 0.380976166091332) for anomaly detection and evaluated performance with precision, recall, and F1-score to minimize false positives.

Movie Recommandation System

- Developed a movie recommendation system using Python, leveraging both content-based filtering (TF-IDF vectorization, cosine similarity) and collaborative filtering techniques. Deployed the solution as a web application with Flask and an HTML interface.
- Created a scalable solution that analyzes user preferences and movie attributes to generate personalized recommendations, enhancing user experience through optimized performance and accuracy.

EDUCATION

B.Tech in Artificial Intelligence & Machine Learning — **Aug 2023 - Present**

Vellore Institute of Technology, Chennai

Higher Secondary Education — **June-2021 - May 2023**

Sri Chaitanya Junior Kalasala

ADDITIONAL INFORMATION

- **Languages:** English, Hindi.
- **Achievements:** Finalist in CodeFolio Portfolio Competition – Top 30 Selection.Secured Top 5 in Sustainovate'25 Hackathon