Yelamanchili Santosh Hrushith

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Education

Indian Institute of Information Technology (IIIT) Kottayam **2022 – Expected 2026**
Bachelor of Technology in Computer Science and Engineering *Current GPA: 7.99/10*

Sri Chaitanya Junior College **May. 2022**
Science stream *Percentage: 93.6*

Work Experience

Visakhapatnam Port Authority **June 2024 – July 2024**
Full Stack Web Development Intern *Visakhapatnam, Andhrapradesh*

- Developed a full-stack web application (MERN stack) for real-time asset management.
- Implemented role-based access controls and dynamic forms for efficient asset tracking, management, and user permissions.
- Enhanced backend performance by designing efficient MongoDB schemas and leveraging Express.js to handle complex queries and data relationships.
- Designed a responsive interface using React.js to ensure a seamless user experience across devices.

Projects

Movie Recommendation System | *Python, TMDB Dataset, TF-IDF, Surprise Library, Scikit-learn* **December 2024**

- Developed a recommendation system integrating Simple Recommender, Content-Based Filtering, Collaborative Filtering, and a Hybrid Engine.
- Implemented a Simple Recommender using TMDB Vote Count, Vote Averages, and the IMDB Weighted Rating System for Top Movies Charts and genre-specific recommendations.
- Built Content-Based Recommenders using TF-IDF with CountVectorizer to analyze movie overviews, taglines, and metadata, prioritizing higher-rated and frequently-voted movies.
- Designed a Collaborative Filtering Engine with the Surprise Library and single value decomposition, achieving an RMSE below 1 and generating user-specific ratings.
- Created a Hybrid Engine combining content-based and collaborative filtering for personalized movie recommendations.

Unitrade | *MERN Stack (MongoDB, Express.js, React.js, Node.js), Socket.io* **October 2024**

- Developed an online marketplace platform tailored for seamless buying and selling of items, targeting college students.
- Implemented core features including product listings, search and filter functionalities, and a streamlined user interface.
- Integrated a real-time chat feature to enable seamless communication between buyers and sellers, enhancing the overall user experience.
- Utilized MongoDB for efficient data storage and retrieval, Express.js and Node.js for backend operations, and React.js for a responsive and dynamic frontend experience.
- Enhanced user experience with intuitive navigation, category-based filtering, and a secure transaction process.

Spam Classification | *Python, Scikit-learn, NLTK, Machine Learning* **July 2024**

- Developed a machine learning model to classify emails as spam or non-spam using text-based features.
- Utilized natural language processing (NLP) techniques with NLTK to preprocess the email data, including tokenization, stopword removal, and stemming.
- Leveraged Word2Vec for feature representation, capturing semantic relationships between words.
- Trained and evaluated models, including Random Forest, SVM, and Decision Tree, achieving 97% accuracy.
- Achieved high classification accuracy, precision, recall, and F1 score to ensure reliable and effective spam detection.

Tomato Leaf Disease Detection | *VGG16, InceptionV3, TensorFlow, Keras* **February 2024**

- Developed a deep learning-based model to detect diseases in tomato leaves using convolutional neural networks (CNNs).
- Implemented VGG16 and InceptionV3 architectures for feature extraction and classification, leveraging transfer learning for improved accuracy.
- Preprocessed dataset by resizing and augmenting images to enhance model robustness and reduce overfitting.
- Trained models using TensorFlow and Keras, achieving a high level of accuracy in classifying various leaf diseases.
- Evaluated model performance with metrics like accuracy, precision, recall, and F1 score to ensure reliable predictions.

Technical Skills

Languages: C++, Python, JavaScript, SQL, HTML/CSS
Frameworks/Libraries: ReactJs, NodeJs, ExpressJs ,TensorFlow, NumPy, Pandas,Keras, scikit-learn, Git
Data Structures & Algorithms in C++