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: 8.01/10*

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

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**

- 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.

Real-Time Chat Application | *Node.js, Express.js, Socket.io, MongoDB, React.js* **September 2024**

- Designed and developed a real-time messaging application allowing users to communicate instantly.
- Integrated Socket.io to handle bidirectional, real-time communication between users, ensuring seamless messaging.
- Utilized MongoDB for efficient message storage and retrieval, allowing persistent chat history across user sessions.
- Utilized Express.js and Node.js for backend operations and React.js for a responsive and dynamic frontend experience.
- Secured application with user authentication and session management for safe and private communication.

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.
- Preprocessed email data using NLTK with NLP techniques like 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 97.8% accuracy.
- Achieved high classification accuracy, precision, recall, and F1 score to ensure reliable and effective spam detection.

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

- Developed a deep learning-based model to detect diseases in tomato leaves using convolutional neural networks (CNNs).
- Implemented VGG16 architecture from scratch for feature extraction and classification.
- Trained model using TensorFlow and Keras, achieving a 97.5% 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++