NARESH VEMULA

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SUMMARY

Graduate Computer Science student with a focus on Machine Learning, Full Stack Development, and AI-driven solutions. Skilled in Python, React.js, and AI/ML frameworks, with hands-on experience in Large Language Models (LLMs), Generative AI, and building scalable systems. Eager to apply AI expertise to drive innovative business solutions and contribute to cutting-edge projects.

EDUCATION

Master of Science in Computer Science — Expected Dec 2025
Texas A&M University - Corpus Christi, Corpus Christi, TX — 3.7/4.0 GPA

Bachelor of Technology in Computer Science — Aug 2023
Mahatma Gandhi Institute of Technology, Hyderabad, India — 3.1/4.0 GPA

TECHNICAL SKILLS

Languages: Python, JavaScript, C
Machine Learning/AI: NumPy, Pandas, TensorFlow, Scikit-learn, Matplotlib
Web Development: HTML, CSS, Tailwind, React.js, FastAPI,REST API, Figma
Natural Language Processing/LLM: AI API Integration (OpenAI, Anthropic, etc.), Hugging Face, TextBlob, Sentiment Analysis, LLM Fine-tuning
Tools: Git, Linux, Postman, Jupyter, Docker

TECHNICAL PROJECTS

Empath AI: Emotion-Sensitive Support Bot with Human Assistance — Sept 2024 – Dec 2024
Developed an AI-powered chatbot that detects and responds to user emotions in real time

- Engineered an NLP-driven chatbot using TextBlob for sentiment analysis and integrated Google LearnLM 1.5 Pro Experimental, achieving 90% accuracy in emotion detection.
- Built a full-stack solution with React.js and FastAPI, reducing response latency by 25% through optimized API calls and efficient state management.
- Implemented a WebSocket-based real-time support system, enabling seamless transitions between AI and human agents, increasing user engagement by 20%.

UniLink: Distributed Social Networking Platform — Jun 2024 – Jul 2024
Designed a scalable social networking platform with real-time data consistency

- Developed a communication platform to enhance collaboration among college students, enabling users to create, update, and delete posts, and interact with shared content.
- Implemented a scalable backend using FastAPI, integrated Redis for caching, and used Cassandra for database management, ensuring fault tolerance and performance.
- Utilized Kafka for real-time message brokering, addressing challenges such as database denormalization and optimizing resource usage with Docker.

Customer Churn Prediction — Jan 2024 – Apr 2024
Developed a machine learning model to predict customer churn

- Built a predictive model using Logistic Regression and Random Forest, achieving an accuracy of 85% on test data.
- Conducted extensive data preprocessing with Pandas, cleaning and transforming data to enhance the model performance.
- Visualized key features influencing churn using Matplotlib and Seaborn, enabling business stakeholders to identify at-risk customers.