Aditiyaa Naag

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Education

PES University 2026
B.Tech. Computer Science *Current GPA: 8.34*

Geethanjali olympiad school (pre - university course)
percentile : 91

Coursework

Courses: Big Data, Data Analytics, Machine Learning, Data Structures and its Applications, Design and Analysis of Algorithms, Computer Networks, Operating Systems, Web Technologies, Database Management System
Awards: Proficiency Award, Scholar with Distinction (5x)

Experience

AI Intern june 2025 – Present
Josh Software *Bangalore*

- Developing an AI-assisted system to auto-generate Playwright scripts for Indian High Court website automation.
- Used LLMs to parse HTML structure and generate navigation flows for extracting cause lists and judgments.
- Improved robustness of automation by handling dynamic dropdowns, CAPTCHAs, and external redirects.

Backend Development Intern September 2024 – November 2024
Stealth Startup *Bangalore*

- Migrated the backend system from Flask to FastAPI, improving performance and scalability.
- Collaborated with the engineering team to ensure seamless migration with minimal downtime.
- Integrated robust API documentation using FastAPI's built-in tools, simplifying future development.

Programming Skills

Languages: Python, C, Golang, HTML, CSS, JavaScript
Technologies:Git, GitHub, React, Node, Express, MongoDB, Swagger UI, MySQL, docker, Hadoop, Spark, Kafka, Numpy, Pandas, Sklearn,playwright

Projects

Distributed Logging System | Python, Kafka, Elasticsearch, Fluentd, Kibana

- Developed a distributed logging system for microservices using Kafka for messaging, Elasticsearch for storage, Fluentd for aggregation, and Kibana for analysis.
- Implemented log filtering, heartbeat monitoring, and real-time failure detection across a 4-microservice architecture.

Real-time ASL Translator using Gemini 2.0 + Streamlit + TTS | *Sign Language Recognition with Gemini Flash*

- Built a real-time American Sign Language (ASL) detection system using webcam video, powered by Google Gemini 2.0 Flash model.
- Developed a Streamlit app that integrates OpenCV for webcam feed, Google's Gemini API for image-based ASL translation, and pyttsx3 for speech synthesis.
- Implemented multithreading with frame queues and text-to-speech (TTS) to ensure responsive UI and smooth real-time interaction.
- Designed robust error handling, frame rate regulation, and fallback mechanisms to manage inconsistent camera behavior and maintain UX.
- Added support for confidence threshold filtering, translation history, and dynamic voice output on new sign detection.

RAG-based PDF Chatbot for Legal Q&A | LangChain, FAISS, OpenAI, PyMuPDF

- Developed a Retrieval-Augmented Generation chatbot that can ingest legal documents (judgments, court orders, etc.) in PDF format and answer user queries.
- Used PyMuPDF to extract structured text, FAISS for vector-based retrieval, and OpenAI for response generation.
- Enabled real-time legal document navigation and Q&A via semantic search and LLM-backed answer generation.

Candlestick Chart-Based Stock Return Predictor | Python, CNN, Matplotlib, YFinance

- Designed a deep learning pipeline to predict short-term stock returns from candlestick chart images using CNN models.

- Processed 5 years of Tesla stock data into sliding window chart images (window=30 days, stride=5 days) labeled by future price movement.
- Trained multiple regression models and selected the best one based on R^2 score to make return predictions from unseen charts.
- Integrated technical indicators and performed performance analysis with confidence-based prediction results.

Hate Speech Recognizer | Python, Scikit-learn
- Developed a hate speech classification pipeline using Decision Tree, SVC, and KNN, achieving nearly 90% accuracy on social media datasets.

MedictoBplus | HTML, CSS, Flask
- Built a web-based health assistant with a chatbot for disease risk prediction and BMI calculation from user input.

Blog-Sphere | Node.js, Express, MongoDB
- Created a blogging platform supporting post creation, editing, and community sharing with interactive UI.

Online Wordle-Like Game | Python, Tkinter, Socket Programming
- Developed a multiplayer Wordle-inspired game with client-server architecture using sockets and threading.
- Implemented a GUI using Tkinter and real-time guess feedback through custom color-coded responses.

Certifications

HackerRank Problem Solving (Intermediate) | *Student*
- Demonstrated proficiency in intermediate problem-solving skills on HackerRank.

PESU-IO Machine Learning | *Student*
- Completed a comprehensive Machine Learning course at PESU-IO.

CIE - L1 | *Student*
- Achieved Level 1 certification in Centre for Innovation and Entrepreneurship techniques and applications.