Hemanth Kumar G

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Summary

AI/ML-focused Software Developer with hands-on experience building and deploying production-ready applications using Python, FastAPI, RAG, LangChain, Hugging Face, and LLM APIs (Google Gemini, Groq). Built end-to-end systems for document question answering, multimodal document processing, sentiment analysis, and real-time AI inference pipelines with measurable improvements in latency and accuracy. Experienced in integrating AI services with React.js, PostgreSQL, and cloud deployments.

Technical Skills

AI/ML: NLP, Hugging Face, Transformers, RAG, LLM, scikit-learn, Pandas, Machine Learning, LangChain
Languages: Python, JavaScript, TypeScript, SQL
Frontend: React.js, Next.js, HTML5, CSS3, Tailwind CSS
Backend: FastAPI, Django, Node.js, Express.js, REST APIs
Databases: PostgreSQL, MongoDB, Supabase
Tools & Cloud: Git, GitHub, Docker, Vercel, Render, AWS, Postman

Work Experience

MERN Full Stack Intern | AccioJob, Bengaluru | 04/2026 - Present

- Developed and deployed full-stack web applications using React.js, Node.js, Express.js and MongoDB, implementing JWT authentication and REST APIs that supported user management and real-time data operations.
- Built responsive React components and integrated Express.js APIs to handle application data flow and user interactions efficiently.
- Managed version control, debugging, and production deployments on Vercel using Git and GitHub.

Python Full Stack Intern | Ethnotech Academy, Bengaluru | 12/2025 - 01/2026

- Built a RAG-based document question-answering system using Python, FastAPI and Qdrant for uploaded PDF documents.
- Implemented document processing, embedding generation and similarity search to retrieve relevant context for accurate answers.
- Developed backend features including user management and REST APIs using Django and SQL.

Python AI/ML Intern | Dotch Endeavours Pvt. Ltd., Mysuru | 11/2024 - 01/2025

- Developed a Twitter sentiment analysis model using Python, NLP and scikit-learn, achieving 85% test accuracy.
- Automated data cleaning and preprocessing pipelines with Python, improving processing time by 20%.
- Performed data analysis and visualization using Pandas and presented insights to the technical team.

Projects

Vextral AI - Document Question-Answering Platform
Tech Stack: Next.js, TypeScript, FastAPI, Python, Google Gemini, Groq, NVIDIA NIM, Supabase, PostgreSQL, Qdrant, LangChain
GitHub: github.com/Hemanth40/Vextral-AI | Live: vextral-ai.vercel.app/

- Built a Next.js and FastAPI document question-answering platform for PDFs, DOCX, CSV files and images.
- Used Google Gemini File API for document processing and integrated Gemini, Groq and NVIDIA NIM with fallback handling.
- Used FastAPI worker threads for long-running AI requests, reducing health-check latency from 15s to under 1ms; model responses reached 1.15 - 1.70s.

MindGuard AI - Mental Wellness App
Tech Stack: React Native, Expo, FastAPI, Python, Hugging Face, Google Gemini, SQLAlchemy, PostgreSQL, JWT, Docker
GitHub: github.com/Hemanth40/MindGuard-AI | Live: mind-guard-ai-tau.vercel.app/

- Built a React Native (Expo) and FastAPI mobile app combining mood, sleep, anxiety and activity data with conversational AI.
- Integrated Hugging Face NLP models (RoBERTa, GoEmotions, DeBERTa), reducing average response time by 71% (from 2.8s to <800ms) through parallel model inference with asyncio.gather().
- Implemented JWT authentication, bcrypt password hashing, SQLAlchemy indexes and async processing; deployed with Docker and Render.

Mandi Mitra - Agricultural Information Platform
Tech Stack: React 19, Vite, Tailwind CSS, Node.js, Express.js, REST APIs
GitHub: github.com/Hemanth40/Mandi_Mitra | Live: mandi-mitra-rose.vercel.app/

- Built a web application for Indian mandi prices, weather data and crop disease detection using government and external APIs.
- Added NodeCache and location-based weather caching, reducing average API response time from 1.2s to under 3ms.
- Integrated Kindwise and Plant.id with fallback handling, achieving 94% diagnostic availability.

Education

Master of Computer Applications (MCA) - CGPA: 8.58/10 | Visvesvaraya Technological University, Mysuru | 2023 - 2025
Bachelor of Computer Applications (BCA) - CGPA: 7.0/10 | Mangalore University, Kodagu | 2020 - 2023

Achievements & Certifications

- Published research paper "KisanSetu: Bridging Farmers with Market & Technology" at ETCST 2025, VTU CPGS.
- Cleared Smart India Hackathon internal qualifier and participated in multiple technical hackathons.