

ATTHAVELLI KARTHIKEYA

Hyderabad, Telangana, India

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Education

Jawaharlal Nehru Technological University Hyderabad

Bachelor of Technology in Computer Science and Engineering | CGPA: 7.5/10

July 2023 – Present

Hyderabad, Telangana

Relevant Coursework

- Data Structures Algorithms
- Database Management Systems

- Operating Systems
- Machine Learning

- Deep Learning
- Natural Language Processing

Experience

Data Analyst Intern

AICTE (Remote)

Nov 2024 – Jan 2025

- Analyzed and interpreted complex datasets with over 50,000 records using Pandas and NumPy, identifying key trends that informed strategic decisions.
- Developed and presented compelling data visualizations (heatmaps, bar charts) using Matplotlib and Seaborn, translating raw data into actionable insights for stakeholders.
- Engineered an automation script for Excel-based data cleaning and preprocessing, reducing manual effort by 40% and improving data consistency.

Achievements

HackRX Hackathon Finalist

All India

- Achieved a Top 30 ranking out of 70,000+ registered participants by designing and building a RAG-based document analysis system.

Projects

Intelligent Document Analysis with RAG | Python, FastAPI, PyTorch, FAISS, LangChain, Claude 3 Haiku

- Developed a production-grade RAG system to analyze long-form financial documents, securing a top 30 position in the HackRX national hackathon.
- Engineered a hybrid retrieval system using FAISS (vector search) and BM25 (keyword search) to enhance contextual accuracy for complex queries.
- Implemented a BAAI cross-encoder for re-ranking retrieved documents, boosting final answer relevance and precision by an estimated 15%.
- Built and deployed the application as a scalable FastAPI server with GPU acceleration, batch processing, and robust logging, mirroring MLOps best practices.

Ride On | React, Tailwind CSS, Supabase

- Architected a full-stack application to empower motorcycle owners with proactive vehicle health tracking, digitizing manual maintenance logs.
- Engineered a feature for predictive service reminders based on odometer input, reducing the risk of unexpected component failure and extending vehicle lifespan.
- Utilized Supabase for real-time database updates and secure user authentication, providing a seamless and synchronized cross-device experience.
- **Live Demo**

Bestiary (NFT-based Digital Collectibles) | React, Solidity, Web3.js, IPFS, Hardhat

- Developed a blockchain-powered decentralized application for creating, owning, and trading unique NFT-based digital creatures.
- Implemented smart contracts in Solidity to handle minting, ownership transfer, and rarity mechanics, deployed on the Ethereum testnet.
- Integrated IPFS for decentralized storage of images and metadata, ensuring immutability and censorship resistance.
- Built a responsive React frontend with Web3.js wallet connection (MetaMask), enabling seamless blockchain interactions for end-users.
- **GitHub Repository**

Technical Skills

AI/ML: PyTorch, Scikit-learn, LangChain, Pandas, NumPy, Matplotlib, FAISS, LLM APIs (Claude, OpenAI), Prompt Engineering

Languages: Python, C++, JavaScript, TypeScript, Java, HTML/CSS

Backend: Node.js, Express.js, FastAPI, MongoDB, Mongoose, Supabase

Frontend: React (Vite), Tailwind CSS, Context API, Responsive Design

Tools & Others: Git, Docker, Postman, VS Code, JWT, bcrypt, REST APIs, Linux