SATHVIK THATIPALLY

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Education

Keshav Memorial Institute of Technology   **2022 − 2026**
Bachelor of Technology - BTech, Computer Science and Engineering (CGPA: 8.14/10)   *Hyderabad, India*

Sri Chaitanya College   **2020 − 2022**
Class 11, 12, MPC (Percentage: 82%)   *Bengaluru, India*

Technical Skills

Languages: Java, Python , JavaScript, SQL ,HTML ,CSS
Web Frameworks: Spring Boot (Web, Security, JPA), Django, Express.js, Flask, FastAPI
Libraries: React.js, Pytorch ,Numpy ,Pandas
API Architectures: RESTful services , gRPC , Web Sockets
AI/ML: Fine-Tuning , RAG, Agentic workflows, Machine Learning
Databases: MySQL ,MongoDB
Deployment/Version Control : Docker, AWS ,Git ,Github

Projects

Any AI   **Aug 2024 − Sep 2024**
- Developed a user interface with React JS, server-side logic with Node.js and Express.js , and implemented JWT-based user authentication.
- Provides enhanced responses by dynamically retrieving information from the web and parsing user-provided PDFs.
- Integrated MongoDB Atlas for data storage and built Python microservices by invoking remote procedure calls through gRPC for handling vector embeddings and LLM-based responses (Gemma).
- Utilized Neo4j for graph-based responses and complex database queries.

AI Based IT Training System   **Mar 2024 − Jul 2024**
- Developed a learning platform using SpringBoot -Web , React.js, Python, and MongoDB for flexible, self-paced learning.
- Integrated fine-tuned LLMs (Gemma, AI21 Studio) with prompt engineering for personalized learning experiences and response generation.
- Implemented adaptive learning features, including dynamic exercises, AI-powered code suggestions, custom content generation, and personalized recommendations based on user progress.

Deepfake Detection   **Oct 2023 − Feb 2024**
- Leveraged EfficientNetV2 for detecting visual inconsistencies in videos, achieving an accuracy of 95 percent .
- Developed custom CNNs to classify audio as deepfake or genuine, utilizing advanced techniques like Mel Spectrograms and Predicting using KNN .
- Integrated audio analysis to enhance detection precision, combining FFTs, MFCCs, and Mel Spectrograms for detailed frequency analysis and Faces captured through MTCNN
- Designed a hybrid model for unified detection of both image and audio deepfakes by giving Streamlit as an interface .
- Incorporated Mistral AI for generating detailed explanations of model predictions, improving interpretability.

Extracurricular Activities

Hackathons
Participated in 7 hackathons, showcasing problem-solving and team collaboration skills.
Riti the Upcycling Club
Served as Treasurer and Developer, managing finances and leading club development projects using Django, Docker, and AWS EC2 for scalable deployment.

Certifications

Cisco Network Academy: Python Essentials 2
Gained hands-on experience with advanced Python concepts including Object-Oriented Programming (OOP)