KUMPATLA SAI CHAITANYA

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SUMMARY

As a Machine Learning & Software Engineering enthusiast, I am passionate about developing AI-driven solutions. Proficient in C, C++, Python, with a strong foundation in data structures, algorithms, and operating systems. Experienced in AI model optimization, deep learning, and computer vision, with hands-on expertise in OpenCV, and PyTorch. Adept at problem-solving, and collaborative teamwork.

ACADEMICS

Master of Technology in Computer Science - AI&ML   *2024 - Present*
Vellore Institute of Technology, Vellore, TamilNadu.   CGPA: 8.5/10

Bachelor of Technology in Computer Science   *2018 - 2022*
Bonam Venkata Chalamayya Engineering College, Odalarevu, Andhra Pradesh.   CGPA: 8.56/10

INTERNSHIP

Research Intern at BNPRS Private Limited   Aug 2024 - Jan 2025

· Worked on a Contactless Fingerprint Recognition project, focusing on image preprocessing and feature extraction.
· Utilized OpenCV and Python frameworks to enhance image quality for fingerprint analysis.
· Contributed to improving the accuracy and efficiency of contactless fingerprint recognition systems.

PROJECTS

LogSentinel: Utilizing Llama 1B Parameter Model for Edge-Based Log Anomaly Detection

· Engineered LogSentinel, a log monitoring tool utilizing BERT and LLaMA models with LoRA-based lightweight tuning and memory-efficient inference for real-time anomaly detection.
· Technologies used: Python, PyTorch, Transformers, Parameter-Efficient Fine-Tuning (PEFT), BitsAndBytes, Pandas, NumPy, Scikit-learn.

E-commerce Data AI Chat Agent

· Developed an AI-driven web application that enables users to chat, analyze, and visualize e-commerce sales data using natural language queries, delivering instant insights and interactive charts.
· Technologies used: FastAPI, LangChain, Gemini LLM, SQLAlchemy, SQLite, Pandas, Matplotlib, Tailwind CSS, JavaScript.

Secure OCR Application with Streamlit and Kafka

· Designed a secure OCR workflow using Streamlit and Keycloak, streaming extracted text via Kafka to PostgreSQL for ML-ready storage.
· Technologies used: Streamlit, Keycloak, Apache Kafka, PostgreSQL, OCR (Tesseract), Python, Docker.

SKILLS

Technical Skills: Machine Learning, Deep Learning, Computer Vision, Prompt Engineering.
Computer Languages: C, C++, Python, SQL.
Libraries and Frameworks: NumPy, Pandas, Scikit-learn (ML); TensorFlow, PyTorch (DL); OpenCV (CV).
Tools and Platforms: Power BI, Power Automate, Hugging Face, Docker, MySQL, Git, VS Code.
Soft Skills: Effective communication, problem-solving, team collaboration.

RELEVANT COURSES

Deep Learning and GenAI	Programming for Data Science
Distributed Data Processing	Application Architecture with Deployment
Security Essentials in Applied AI	Artificial Intelligence with ML
Edge Computing	Data Engineering
Large Language Models	Visual Analytics