Anany Sharma

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Education

University Of Florida — Gainesville, Florida
Masters in Artificial Intelligence Systems — *Expected Graduation: May 2026*
Relevant Coursework: Computer Vision, AI Systems, Machine Learning for AI, Data Structures, Applied Deep Learning, Advance Neural Networks for Computing, Edge AI and Iot Applications.

SRM Institute of Science and Technology — Chennai, India
Bachelors in Computer Science; — *June 2021*
Relevant Coursework: Artificial Intelligence, DBMS, Data Structures And Algorithms, Software Engineering, Operating Systems.

Experience

Software Engineer - AI/Data Science — Noida, India
United Health Group (Optum) — *January 2022 - August 2024*

- AI and ML Research and Development:
  - Engineered and deployed **multi-modal Retrieval-Augmented Generation(RAG)** agents using **Azure AI Search** and **OpenAI** models, improving retrieval speed by 40% and adoption by 50%, with a **ReactJS** frontend and **Flask** backend for seamless AI-driven insights and scalability. Optimized **Azure Blob Storage**, reducing retrieval latency by 40%.
  - Designed **OCR NLP** models, automating claim receipt validation, reducing adjudication time and cost by **20%**, and enhancing accuracy in information extraction by **30%.**
  - Developed **Power BI** dashboards, visualizing business KPIs in real-time, improving decision-making efficiency.
- Reporting and Analytics: Automated **1.5K+ financial reports** biweekly, leveraging **MS BI (SSRS, SSIS, Power BI)** to ensure business continuity streamlined reporting. Reduced report generation time by **20%**
- ETL: Designed **ETL** pipelines processing **10M+ claims/month**, leveraging **IBM WTX UNIX AIX**, optimizing data transmission speed via IBM messaging queues.
- Achievements: Received 5 Bravo! awards in 2.5 years for performance recognition.

Skills Summary

- **Languages and Frameworks:** Python(expert), C++(intermediate), Javascript(intermediate), Dart(intermediate), SQL(expert), NoSQL(intermediate), Django(intermediate), Flask(proficient), Fast API(proficient), ReactJS(proficient), Angular(beginner), MongoDB(intermediate), Redis Storage(intermediate) .
- **Technologies:** Computer Vision(proficient), Natural Language Processing(proficient), Machine Learning(proficient), Deep Learning(proficient), Azure, AWS, Pytorch(proficient), IBM WatsonX AI, Open AI(proficient), LangChain, Scikit-learn, Pinecone, CrewAI(proficient), LangGraph, Panda, Numpy, Hugging Face, Supabase, Linux, Git, MSBI(SSIS, SSRS, Power BI).

Projects

- **SMIRE AI - A Medical Multi-Agent system(GenAI)GITHUB:** An AI-powered medical assistant offering services like appointment booking, doctor/clinic search, medical news, consultations, and health management (reports, dosages, insights(**RAG**)) in a single platform. Tech Stack: **NextJS**, **FastAPI**, **Supabase**,**OpenAI/CrewAI**, **PostgreSQL**, **Docker**, **Git**.
- **CORAS - Context-Based Intelligent Knowledge Retrieval System(GenAI)GITHUB:** Built a **Retrieval-Augmented Generation (RAG) system** using **OpenAI embeddings**, **Pinecone vector indexing**, **Flask API**, **PyPDF2** for PDF processing, **OpenAI whisper** for audio processing. Integrated **multimodal capabilities** to handle both text and audio data for enhanced knowledge comprehension. Managed the **entire lifecycle** from ideation to deployment, including conceptualization, development, testing, monitoring, and performance evaluation in production. Leveraged **Prometheus and Grafana** for operating and monitoring.
- **RESILITREE - Tree Fall Risk Prediction and Disaster Response (Deep Learning/GenAI)GITHUB:** Presented at the **UF/IBM Hackathon**. Combined **CNN models (EfficientNet)** in PyTorch to predict tree fall risks, integrated with an **IBM Granite-13B-powered chatbot** for safety guidance. Created an interactive UI based on streamlit with feedback and monitoring implemented using **prometheus and grafana**.
- **KISSAN - Crop Recommendation Model/Chatbot (Deep Learning)GITHUB:** Presented at the **Smart India Hackathon**. Sourced crop data, annotated labels, and built a recommendation engine. Developed a chatbot interface for user interaction and collaborated effectively to integrate features. Tech Used: Python, Keras, Flask, K-Means Clustering.

Patent Publication

- **"Crowd Detection and a Method Thereof - IIP(2021)"** **PATENT** : Developed a **YOLOv5-based** multimodal PPE and mask detection system with high-risk crowd detection, leveraging **Python, Flask, OpenCV, Darknet**, and **Docker scalability**. Delivered real-time alerts and optimized performance using transfer learning and mAP evaluation.