Anany Sharma

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EDUCATION

University Of Florida Gainesville, Florida
Masters in Artificial Intelligence Systems *Expected Graduation: May 2026*
Coursework: Computer Vision, Natural Language Processing, Machine Learning, Data Structures and Algorithms, Applied Deep Learning, ML for Time Series, EdgeAI, Data Science, Model Deployment, Distributed Computing, Predictive Modeling, Recommendation Systems.

EXPERIENCE

Graduate AI Research Assistant Gainesville, Florida
University of Florida *March 2025 - Present*

- Developing and deploying **edge AI models** on smart **embedded systems** using the **AHA(AI Hardware Adventure) board with 5+ sensors** (e.g., oxymeter, motion, light, and weather sensors) to enable real-time, **data-driven decision-making** applications. Optimizing and validating models on **Edge Impulse** for efficient edge deployment, ensuring performance on **IoT devices**. Leading the creation of an AI curriculum for **200+ K-12 to undergraduate students**, integrating edge AI concepts to equip future innovators with hands-on experience in cutting-edge technologies.

Software Engineer Noida, India
United Health Group (Optum) *January 2022 - August 2024*

- 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 20%.
- Engineered **Optical Character Recognition & NLP** pipelines leveraging **Azure Document Intelligence**, 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.

Machine Learning Intern Remote, India
MFIT Technologies *September 2021 - December 2021*

- Developed an **NLP-powered** financial data extraction system using **OCR (Tesseract)**, **Conditional Random Fields** models, and spatial modeling to automate transaction monitoring from bank statements, achieving **85%** field-extraction accuracy. .
- Designed a hybrid **Named Entity Recognition + layout**-aware extraction framework adaptable to **10+ document formats**.
- Engineered a dynamic **CRF-Spatial model** combining sequential patterns and geometric features (coordinates, **IOU**) for robust parsing of credit/debit statements across **4 major banks**.

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).
- **Technologies:** Azure, Amazon Web Services (AWS), Pytorch, Open AI, Tensorflow, Keras LangChain, LlamaIndex, LangGraph, Scikit-learn, Pinecone, CrewAI, Hugging Face, Supabase, Linux, Git, MSBI(SSIS, SSRS, Power BI), Docker.

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**, and **OpenAI Whisper**. Integrated multimodal capabilities to handle both text and audio data. Leveraged **Prometheus** and **Grafana** for monitoring.

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**. Achieved an average precision of **60%** on 'PPE kit' class, **85%** AP on 'mask' class and **80%** on 'No mask' class.