MEGHANA RABBA

Chicago, IL | mrabba@illinoistech.edu | https://www.linkedin.com/in/meghanarabba/

EDUCATION

Illinois Institute of Technology, Chicago, IL Expected graduation: **May 2026**
- Master of Science, Computer Science | GPA : 4.0 | SEMESTER 2
- Coursework: Computer Vision, Software Project Management, Machine Learning, Deep Learning

JSS Academy of Technical Education **May 2024**
- Bachelor of Engineering, Computer Science | GPA : 3.9
- Coursework: AI and ML, Computer Graphics, UI/UX, Object-Oriented Concepts, Python

SKILLS

- **Programming Languages:** Python | C | Dart
- **Machine Learning Frameworks & Libraries:** TensorFlow | PyTorch | Scikit-learn | NumPy | Pandas | OpenCV | Keras | Hugging Face| MLflow| Lang Graph |Autogen
- **AI/ML Concepts:** Neural Networks | Computer Vision | Deep Learning | Transformers & LLMs | Natural Language Processing | Reinforcement Learning | Supervised Learning | Unsupervised Learning | Feature Engineering
- **Cloud Platforms:** S3 | Vertex AI | Firebase | Azure
- **Databases:** SQLite | PostgreSQL | MongoDB
- **Tools & Methodologies:** Git | Docker | Kubernetes | Agile | Jupyter Notebooks| Plotly Dash

PROFESSIONAL EXPERIENCE

Software Engineer **July 2025**
Wells Fargo Job Simulation-Virtual Internship
- Fine-tuned 4-entity data architecture with Spring Boot, JPA, and H2, ensuring 100% persistence accuracy.
- Refined onboarding by 35% through Maven-based automation and Git-driven version control workflows.

Software Engineer **May 2025**
Deloitte Technology Job Simulation-Virtual Internship
- Devised **Python algorithms** to solve simulation coding tasks, boosting **data processing** accuracy and reducing errors by **30%.**
- Formulated a **practical project proposal** using Python insights, demonstrating strategies to cut downtime across factories by **25%**.

Software Developer Intern **September 2023-May 2024**
AGRI TYPE Research Lab, Bangalore
- Simulated the integration of distinct **AI models** into Flutter app using **TensorFlow Lite**, improving soil analysis accuracy by **85%**.
- Amplified user adoption by **62%** via **Flutter UX redesign**, earning national recognition.

PROJECT PORTFOLIO

Road Damage Detection using YOLOv7 and Coordinate Attentions **April – June 2025**
- Synthesized an automated road damage detection and classification system, integrating **YOLOv7**, **Coordinate Attentions**, and **label smoothing**, achieving **mAP 84.2%** and **F1-score 81.6%** accuracy.
- Optimized the model's inference speed to process **27 frames per second**, ensuring real-time capability, using **hardware-aware tuning** and reducing manual inspection by **60%**.

Edge-Based Fire Detection **January - March 2025**
- Engineered a fire detection system using **OpenCV's motion and colour-based fire segmentation** techniques on Raspberry Pi, achieving **99.5% accuracy** and sub-2-second latency.
- Accelerated detection in low-visibility conditions using **Vision-Language Models (VLMs),** image enhancement filters, and **multi-frame averaging**, improving overall fire detection accuracy by **40%**.

Criminal Facial Recognition System **March - April 2024**
- Introduced a Python-based facial recognition pipeline leveraging **OpenCV** and **Caffe deep learning models**, improving **feature extraction** and recognition accuracy to **98%**.
- Modernized the **LBPH recognizer** and **Tkinter**-based desktop GUI, integrating **Haar cascades**, threading, and real-time processing, increasing face match throughput by **25%**.

CERTIFICATES AND ACHIEVEMENTS

- Awarded **First Prize, UNCOMMON HACKS(MLH),** Mar 2025,surpassing 125+ teams.
- Attained **Amazon Web Services(AWS) certification** recognizing mastery in **Machine Learning Foundation**.
- Earned **Google Cloud Boost Skills Badges** in **Introduction to Responsible AI, Generative AI, LLM, MLOps, Attention Mechanisms, Google Cloud ,Security for AI.**