Rajinikanth Boini

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| GitHub: https://github.com/RajiniBoini Portfolio: **https://rajinikanthboini.me/**

PROFESSIONAL SUMMARY

Master's graduate in Data Science building production-ready AI systems with real-world impact. I specialize in computer vision, machine learning, and scalable data pipelines—taking ideas from prototype to deployment. I focus on writing clean, maintainable code, measuring performance with clear metrics, and designing systems that work reliably in production environments.

Skills and Certifications

Data Science & ML Engineering :	▪ End-to-End ML Pipelines ▪ Real-Time Inference & Analytics ▪ Feature Engineering ▪ Python ▪ PyTorch ▪ SQL
AI & Deep Learning :	▪ Deep Learning (CNNs, Transformers) ▪ Computer Vision (Object Detection, Segmentation, Face Recognition) ▪ NLP & Vision-Language Models (VLMs, RAG) ▪ Model Fine-Tuning & Evaluation
Data Engineering & Cloud Platforms :	▪ Distributed Data Processing ▪ Streaming & Event-Driven Systems (Apache Kafka) ▪ MongoDB ▪ AWS ▪ Google Cloud Platform
Certifications :	▪ Google Cloud Certified Cloud Associate Engineer. ▪ Infosys Certified Java Developer ▪ Data Science Foundations: Data Engineering ▪ Machine Learning using Python

EDUCATION

Master of Science in Data Science | University of New Haven, Tagliatela College of Engineering – West Haven, CT

Dec 2025 3.75 GPA

- **Coursework:**
  ▪ Machine Learning ▪ Big Data ▪ Data Visualization ▪ Deep Learning ▪ Natural Language Processing (NLP) ▪ Leadership in Data & AI Products ▪ Data Ethics etc.

Bachelor of Technology in Civil Engineering | International Institute of Information Technology, Rajiv Gandhi University Of Knowledge Technologies ▪ Basar, Telangana, India   **June 2021 3.2 CGPA**

PROFESSIONAL EXPERIENCE [Infosys] ▪ [Hyderabad], [India]   [August] [2021]–[July] [2024]

Systems Engineer | Infosys, Hyderabad, India   **August 2021 – July 2023**

- Developed Kotlin and Java-based applications, implementing RESTful web services.
- Contributed across all phases of the software development lifecycle.
- Collaborated with cross-functional teams to deliver high-quality software.
- Maintained unit and integration tests; participated in code reviews and updated legacy codebases.

Angular/UI Developer | Infosys, Hyderabad, India (Project: Webex Connect)   **August 2023 – July 2024**

- Built user interfaces using Angular 14, HTML, CSS, and JavaScript.
- Specialized in accessibility features including keyboard navigation and screen reader support.
- Integrated UI components in collaboration with development teams.
- Provided ongoing technical support for UI functionality and accessibility.

PROJECTS

VINIMI: AI-Powered Workplace Safety Monitoring System **December 2025**

• Developed real-time safety compliance system using YOLO v8 (helmet detection) and DeepFace (facial recognition) to automate workplace safety monitoring in construction environments.

• Integrated Qwen Vision Language Model for natural language safety queries and built FastAPI backend with 25+ endpoints for violation detection, worker management, and automated SMS alerts.

• Implemented video analysis pipeline with majority voting algorithm and multi-sample face embedding system for accurate worker identification across camera frames.

Campus Trash Segmentation: Automated Waste Classification System **December 2025**

• Developed DeepLabV3-ResNet50 semantic segmentation model for pixel-level trash classification, achieving 58.86% mIoU (551% improvement over baseline) with ASPP for multi-scale context modeling.

• Implemented transfer learning from ImageNet and auxiliary loss regularization, achieving 98.34% IoU for background class and 78.24% IoU for non-recyclable waste classification.

• Conducted systematic hyperparameter optimization and comprehensive data augmentation pipeline to address class imbalance in 193-image campus dataset, reducing test loss by 79.1%.

Airline Sentiment Analysis | University of New Haven **August 2024**

• Analyzed ticket prices and flight delays across major U.S. cities.

• Created insights and visualizations using Python, MS Excel, and Power BI.

Integration of Augmented Reality in Building Information Modelling (BIM) **May 2021**

• Designed 3D building models in Unity3D, overlayed on real-world environments for enhanced walkthroughs.

• Implemented AR-BIM integration for real-time visualization and comparison of plans with completed work.