Ravikiran Aithal

Artificial Intelligence and Machine Learning Student
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Experience

Emmetra - AutoIQ Bengaluru, India
Project Intern *Apr 2025 - May 2025*

- Developed **AutoIQ**, a deep learning tool for converting RAW sensor inputs to high-quality RGB images.
- Designed and implemented **ParaNet** for dynamic enhancement parameter prediction.
- Built **High Fidelity Proxy (HFP)** network for accurate image reconstruction.
- Optimized image fidelity using **PSNR** and **SSIM** as evaluation metrics.
- Delivered cost-cutting and time-saving improvements at Emmetra by optimizing model tuning workflows.

BOSTON-RVCE Centre of Excellence In AI Reasearch Bengaluru, India
Project Intern *Nov 2023 - Dec 2023*

- Developed a credit risk prediction tool using **XGBoost** to assess loan default likelihood.
- Applied **business intelligence** techniques to define the core problem and guide model design.
- Performed **data preprocessing** and model training based on real-world financial criteria.
- Achieved 93% accuracy in predicting credit defaults, ensuring robust real-world impact.

Education

RV College of Engineering, Bengaluru, India
B.E. in Artificial Intelligence and Machine Learning — CGPA: 9.26 *Nov 2022 - Jul 2026*

Sri Venkatrama PU College, Udupi, Karnataka
Pre University — PCMC Percentage: 97.83 *Aug 2020 - Jun 2022*

Projects

Clear Zone AI - Intelligent Vision System for Workplace Safety

- Developed Clear Zone AI, a real-time computer vision system for workplace safety monitoring.
- Utilized **YOLO** and **MediaPipe** for detecting unsafe conditions and risky behaviors.
- Implemented **object detection**, **semantic segmentation**, and rule-based logic for violation tracking.
- Integrated live video analytics using Droid Cam, real-time alerts using **SMTP**, and compliance monitoring features.
- Implemented a industry ready, scalable AI system for real-time hazard detection and prevention.

Human Intervention Detection on Railway Track

- Designed and deployed a **YOLO**-based model for real-time human detection on railway tracks.
- Utilized a **custom dataset with 5000+ annotated images** for training and evaluation.
- Developed an end-to-end pipeline covering data preprocessing, model training, and evaluation.
- Achieved real-time detection for railway safety applications by deploying the model on a Raspberry Pi.

VRSorted - A Design Thinking-Driven VR Solution for Sorting Algorithms

- Applied a detailed **design thinking** approach to identify learning gaps in sorting algorithm concepts.
- Developed an immersive **VR application** using tools like **Unity** for interactive gameplay and visual cues.
- Enhanced conceptual clarity through immersive VR gameplay, validated and tested by 100+ students at RVCE.
- Conducted iterative testing to refine interface and interaction design, resulting in improved learner engagement.

Skills

- **Languages:** C++, Python, C
- **ML/DL:** Supervised/Unsupervised Learning, Neural Networks
- **Data Science:** NumPy, Pandas, R, Tableau, Power BI, Orange
- **CV/Tools:** OpenCV, Roboflow, YOLO, Tkinter
- **Tech Stack:** MySQL, Hadoop, Anaconda
- **DSA:** Data Structures, Problem Solving