Ravikiran Aithal

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 RavikiranAithal | RaviiAithal | </> LeetCode

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*

Experience

Emmetra - AutoIQ   Bengaluru, India
Project Intern   *Apr 2025 - June 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.
– Increased detection task by 54% 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.
– Achieved 93% accuracy in predicting credit defaults, ensuring robust real-world impact.

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 monitoring features.
– Implemented a industry ready, scalable AI system for real-time hazard detection and prevention.

GOALIE – Game Observations Analysis via Linguistic Information Extraction

– Built a **Chromium browser** extension delivering real-time football match insights with AI-generated snippets, tactical commentary classification, and interactive event visualization.
– Developed a **Flask** backend integrated with a **Gradio**-hosted Hugging Face NLP model to classify commentary.
– Processed and balanced a 150K-sample football commentary dataset (SoccerNet-Echoes) to train and benchmark multiple ML models, selecting **Logistic Regression** with **TF-IDF** as the top performer.

Machine Downtime Analysis with PySpark

– Designed and implemented a distributed big-data pipeline using **Apache Spark** and **Hadoop** to process large-scale manufacturing downtime data.
– Created interactive dashboards, transforming raw metrics into actionable insights for decision-making.
– Inlcuded real-time data streaming with **Kafka** and ML models for predictive downtime alerts.

Publications

– R. Aithal, "Sustainable Education: A Design Thinking Approach for Quality Education," **IEEE Xplore**, 2025.
– R. Aithal, "Enhancing Railway Safety Through Human Activity Recognition," **IEEE Xplore**, 2025.

Skills

– **Languages:** C++, Python, C
– **ML/DL:** Supervised/Unsupervised Learning, Neural Networks, NLP
– **Data Science:** NumPy, Pandas, Tableau, Power BI
– **GenAI:** MCP, Agentic AI
– **CV Tools:** OpenCV, Roboflow, YOLO, Tkinter
– **Technologies:** MySQL, Hadoop, Anaconda
– **DSA:** Data Structures, Problem Solving