RONITH DHANESH

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EDUCATION

Vellore Institute of Technology 2022–Present
BTech in CSE with Specialization in AI and ML - 8.47
Bhopal, Madhya Pradesh

The Indian School Bahrain 2021–2022
Higher Secondary Education - 75%
Isa Town, Kingdom Of Bahrain

The Indian School Bahrain 2019–2020
Secondary Education - 83%
Isa Town, Kingdom Of Bahrain

TECHNICAL SKILLS

- **Programming Languages**: Python, Java, JavaScript, HTML, CSS, SQL
- **SDK/IDEs**: VS Code, Jupyter Notebook, CLI
- **Frameworks/Technologies**: Django (Learning), TensorFlow, Keras, PyTorch
- **Tools**:Git, GitHub, OpenCV, NumPy, Pandas, Matplotlib, SQLite
- **Core Competencies**: Machine Learning, Deep Learning, CNN, Computer Vision, Frontend Development, Object-Oriented Programming (OOP)

PROJECT HIGHLIGHTS

AI-Powered Medical Report Analyzer 2025

Python, Streamlit, LangChain, Groq, Tesseract OCR

- Engineered comprehensive medical document processing system using OCR and LLMs for automated analysis.
- Integrated Tesseract OCR with LangChain framework and Groq LLMs to extract and interpret medical terminology.
- Developed responsive Streamlit web app with real-time upload, supporting multiple formats and batch processing.
- Implemented robust error handling, validation pipelines, and expanded with AI insights and cloud deployment.

Real-Time Vehicle Detection and Counting System 2025

Python, OpenCV, YOLOv8, SORT, NumPy

- Architected advanced computer vision pipeline using YOLOv8 and SORT tracking for accurate vehicle monitoring.
- Engineered sophisticated geometric algorithms for complex traffic scenarios and non-horizontal counting lines.
- Optimized detection performance via binary masking, reducing computational overhead by 40%.
- Implemented confidence thresholding and multi-class filtering with 30+ FPS real-time processing.

Medical Image Classification using Deep Learning 2024

Python, TensorFlow, Keras, Streamlit

- Developed ResNet-based model with transfer learning for cataract vs. non-cataract classification.
- Implemented data preprocessing pipeline with normalization, augmentation, and dataset splitting.
- Achieved high accuracy through fine-tuning and hyperparameter optimization.
- Deployed as Streamlit web app for real-time medical image analysis by healthcare professionals.

CERTIFICATIONS

- Privacy and Security in Online Social Media – NPTEL, IIT (2024)
- MATLAB Simulink Onramp – MathWorks
- Python Essentials – Vityarthi
- Applied Machine Learning in Python – Coursera
- IBM Certified Blockchain Developer Fundamentals
- IBM GenAI using Watsonx

ADDITIONAL DETAILS

- **Languages**: Malayalam (Native), English (Fluent), Hindi (Conversational)
- **Leadership**: Malayalam Club Member, Event Planning, Budget Management, Social Media Coordination
- **Strengths**: Problem-solving, Public Speaking, Technical Innovation, Team Collaboration
- **Interests**: Photography, Open-source contributions, Community event management