Mohammed Shihas

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EDUCATION

Bachelor of Technology Computer Science and Engineering   Kerala | 2019-2023
APJ Abdul Kalam Technological University

EXPERIENCE

LUMINAR TECHNOHUB | Data Science Intern ⌁   Kochi, Kerala | Jan 2025 - Present

- Developed data-driven solutions using **Python**, **Pandas**, and **SQL**, including predictive modeling and trend analysis.
- Created interactive visualizations with **Matplotlib** and **Seaborn** to enhance data insights.
- Built a **diabetic retinopathy classification model** using **ResNet** and **PyTorch**, addressing class imbalance.
- Developed a **Flask-based YOLOv3 object detection app** with a frontend for real-time predictions.

LUMINAR TECHNOLAB | Data Science Trainee ⌁   Kochi, Kerala | Sep 2023 – July 2024

- Worked on data-driven solutions, leveraging **Python**, **Pandas**, and **SQL** for large-scale data analysis.
- Developed predictive models to analyze trends and improve decision-making.
- Created interactive data visualizations using **Matplotlib** and **Seaborn**, making insights more accessible.
- Assisted in **feature engineering and model evaluation**, improving model performance and reliability.

PROJECTS

DIABETIC RETINOPATHY CLASSIFICATION ⌁   PyTorch, ResNet, Computer Vision, Augmentation

- Built a binary classification model to detect referable vs non-referable diabetic retinopathy.
- Handled severe class imbalance using data augmentation.
- Implemented ResNet for feature extraction and achieved 94.8% accuracy.
- Optimized model training using GPU acceleration for faster performance.
- Evaluated using ROC Curve, Precision-Recall, and F1-score.

CROP DISEASE CLASSIFICATION ⌁   TensorFlow, EfficientNet, Computer Vision

- Built a multi-class classification model to detect crop diseases using the PlantVillage dataset.
- Handled class imbalance by resampling instead of augmentation.
- Implemented EfficientNet for feature extraction and achieved 85% accuracy.

YOLO OBJECT DETECTION WITH FLASK ⌁   YOLOV5, Flask

- Integrated a pretrained **YOLO** model for object detection and built a **Flask** frontend for deployment.
- Designed a user-friendly interface for uploading images and displaying real-time detection results.
- Optimized image processing and response time to ensure smooth performance.
- Implemented basic error handling and validation for user-uploaded images.

BABY CARING AID WITH THE APPLICATION OF ANALYSIS ⌁   Computer Vision, Mediapipe

- Integrated live video analysis to provide real-time assistance in baby care tasks.
- Leveraged advanced analysis techniques to interpret live video feeds.
- Offered insights and recommendations to caregivers based on video analysis.
- Achieved a notable accuracy score of 0.82.

SKILLS

Languages: Python, SQL, HTML, Bash
Machine Learning: Scikit-Learn, TensorFlow, PyTorch, OpenCV, NumPy, Pandas, Matplotlib, Seaborn
Deep Learning: ResNet, CNNs, RNNs, Transformers, GANs, LSTMs, Transfer Learning