# Mohammed Amaan

## Career Objective

Passionate about building intelligent and interpretable computer vision systems using deep learning. Eager to contribute to end-to-end AI solutions in impactful domains.

## Technical Skills

- Languages: Python
- ML / Deep Learning: Supervised Learning, CNNs, Transfer Learning (MobileNet, ResNet, EfficientNet, Inception), U-Net, TensorFlow, Keras, Scikit-learn
- Computer Vision: OpenCV, scikit-image, PIL; image classification, object detection, segmentation
- Tools: Jupyter, VS Code, Google Colab, FastAPI

## Projects

- Fundus Disease Classifier – Trained a deep learning model to classify retinal fundus images (Normal, Glaucoma, Cataract, Diabetic Retinopathy). Boosted test accuracy from 25% (custom CNN) to 91% using MobileNetV2 with fine-tuning. Applied Grad-CAM to validate model focus on disease-relevant retinal regions.
  https://github.com/Amaan-developpeur/fundus-image-disease-classification
- Heart Disease Prediction – SVM-based classification model using patient health data, achieving ~85–90% accuracy; SHAP used for interpretability.
  https://github.com/Amaan-developpeur/heart-disease-predictor
- Retinal Vessel Segmentation – U-Net-based segmentation of blood vessels on DRIVE/Kaggle fundus datasets; achieved ~0.90 Dice score.
  https://github.com/Amaan-developpeur/retinal-vessel-segmentation
- Simple Reflex AI Agent – Rule-based four-class fundus screening system with a lightweight neural net and sequential decision refinement.
  https://github.com/Amaan-developpeur/simple_reflex_ai_agent
- Rank Predictor (FastAPI API) – RESTful ML API to predict student ranks from scores; used Pydantic, containerized for production deployment with multi-client support
  https://github.com/Amaan-developpeur/fasteapi-rank-predictor.

## Education

MCA, Aurora PG College, Hyderabad — Expected 2025

B.Com (Computer Applications), AV College, Hyderabad — 2023

## Certifications

HackerRank Python (Basic) – https://www.hackerrank.com/certificates/29795e331500