Clinical Report

Generated: 2025-11-12 15:20:50

Stage: MODERATE

Metadata Snapshot

Name: raj

Age: 58

Gender: Male

Systolic (mmHg): 135

Diastolic (mmHg): 88

BMI: 28.5

Glucose: 155

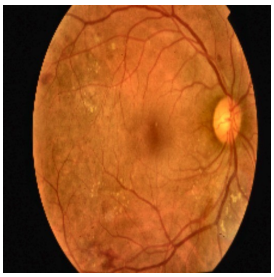
HbA1c: 7.9

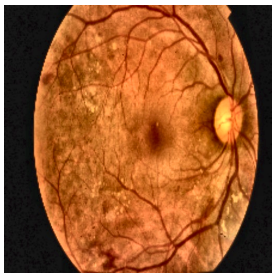
Cholesterol: 210

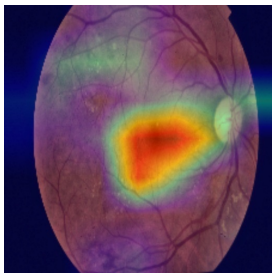
Smoking: No

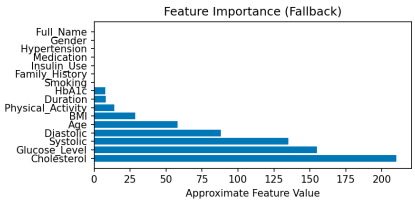
Hypertension: Yes

Diabetes Duration: 8









Summary

- Clinical Report — Ophthalmologist
- Patient: Name: raj, Age: 58, BMI: 28.5
- Predicted stage: MODERATE
- Model confidence: 85.29%

Summary

Generated: 2025-11-12 15:20:51

- Risk score: 95.8%
- Findings (automated lesion quantification):
- - Microaneurysms: 27.35%
- - Exudates: 2.18%
- - Hemorrhages: 5.48%
- - Cotton Wool: 0.00%
- - Neovascularization: 30.00%
- - Total Lesion Load: 35.02%
- Clinical interpretation:
- Multiple dot-blot hemorrhages and early exudative changes noted. Consider ophthalmology review and OCT if macular edema suspected.
- Model & Explainability:
- - Multi-model fusion: CNN ensemble (EfficientNet, ResNet50, ViT) + metadata models (RF, XGBoost, stacked ensemble).
- - Explainability outputs available: GradCAM++, LIME, SHAP — review heatmaps and overlay masks.
- Performance metrics:
- - Accuracy: 0.947
- - F1-score: 0.938
- - AUC/ROC: 0.971
- Suggested clinical action items:
- 1. Correlate with slit-lamp exam and fundus exam.
- 2. If macular edema suspected, obtain OCT imaging.
- 3. For suspected PDR, arrange urgent retina referral for potential PRP/anti-VEGF.
- 4. Document lesion masks if available for audit.