

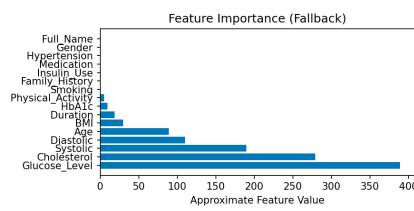
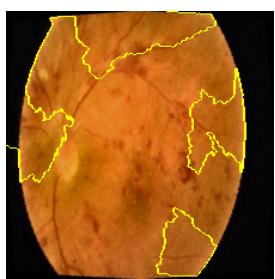
Clinical Report

Generated: 2025-12-04 07:48:56

Stage: PDR

Metadata Snapshot

Name: Sebastian
Age: 89
Gender: Male
Systolic (mmHg): 190
Diastolic (mmHg): 110
BMI: 30.1
Glucose: 389
HbA1c: 9.8
Cholesterol: 279
Smoking: Yes
Hypertension: Yes
Diabetes Duration: 19



Summary

- Clinical Report — Ophthalmologist
- Patient: Name: Sebastian, Age: 89, BMI: 30.1
- Predicted stage: PDR
- Model confidence: 83.96%

Summary

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- Risk score: 96.04%
- Findings (automated lesion quantification):
 - Microaneurysms: 26.90%
 - Exudates: 15.32%
 - Hemorrhages: 3.65%
 - Cotton Wool: 0.00%
 - Neovascularization: 30.00%
 - Total Lesion Load: 45.88%
- Clinical interpretation:
 - Features consistent with proliferative DR (neovascularization). Immediate retina specialist referral recommended (consider anti-VEGF / PRP).
- 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.

