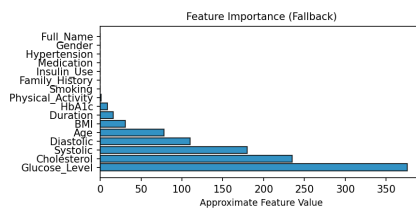
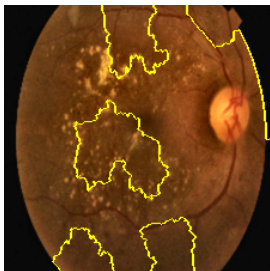
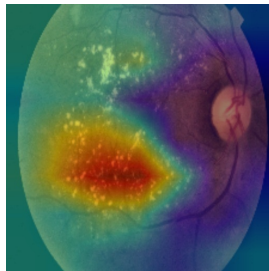
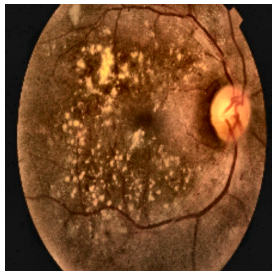


Stage: SEVERE

Metadata Snapshot

■■■■■■■: solomon	
■■■■■■■: 78	
■■■■■: Male	
■■■■■■■■■■■ (mmHg): 180	
■■■■■■■■■■■ (mmHg): 110	
BMI: 30.8	
■■■■■■■■■: 376	
HbA1c: 8.6	
■■■■■■■■■■■: 235	
■■■■■■■: Yes	
■■■■■■■■■■■: Yes	
■■■■■■■ ■■■■: 16	



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- Clinical Report — Ophthalmologist
- Patient: Name: solomon, Age: 78, BMI: 30.8
- Predicted stage: SEVERE
- Model confidence: 83.6%



- Risk score: 95.42%
- Findings (automated lesion quantification):
 - - Microaneurysms: 17.09%
 - - Exudates: 4.29%
 - - Hemorrhages: 2.50%
 - - Cotton Wool: 0.00%
 - - Neovascularization: 25.00%
 - - Total Lesion Load: 23.89%
- Clinical interpretation:
 - Extensive hemorrhages, venous beading and/or cotton-wool spots consistent with severe NPDR. Urgent referral advised.
- 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.

