

# VisionAI — Doctor Report

## Patient Metadata

Full\_Name: Jenifer  
Age: 56  
Gender: Female  
Systolic: 180  
Diastolic: 110  
Glucose\_Level: 343  
BMI: 30.8  
Duration: 14  
Smoking: Yes  
Hypertension: Yes  
Family\_History: Yes

## Diagnostic Summary

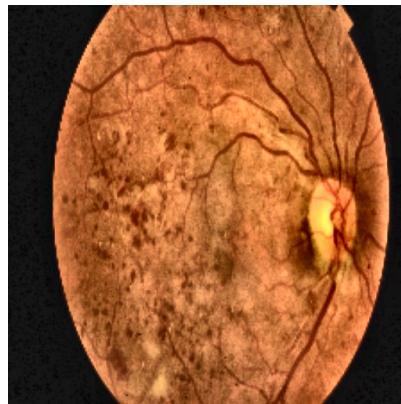
Predicted: SEVERE | Confidence: 56.15%

Composite Risk Score: 96.40

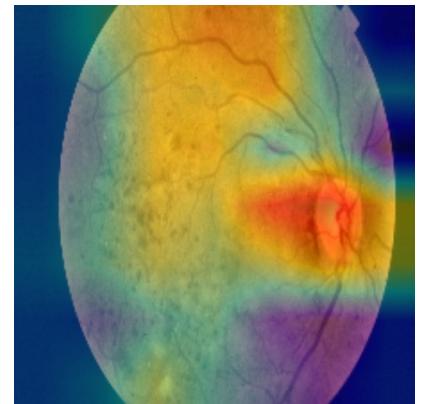
Original



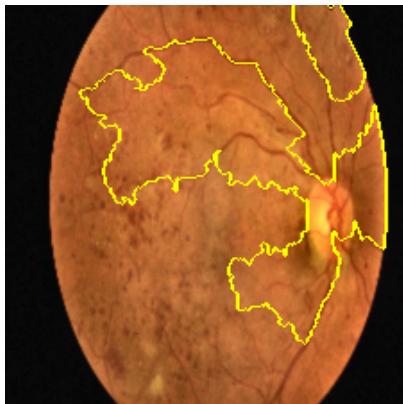
Preprocessed



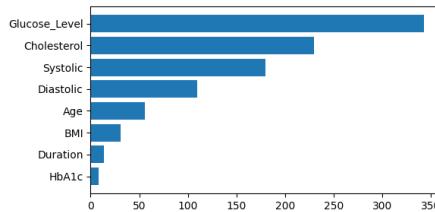
GradCAM



LIME



SHAP (Feature Importance)



## Lesion Analysis & Quantification

Lesion Quantification:

exudates: 19.102  
hemorrhages: 0.333  
cotton\_wool: 0.0  
lesion\_percentage: 19.435

## Clinical Interpretation & Recommendations

- High risk of progression to proliferative disease; urgent review advised.
- If macular edema suspected, order OCT.
- Refer to retina specialist for high hemorrhagic burden.
- Optimize systemic therapy (glycemic, BP, lipid control).
- Consider photographic follow-up and OCT monitoring (1–3 months depending on severity).

## Model Evaluation Metrics

Accuracy: 0.947  
F1-score: 0.938  
AUC/ROC: 0.971