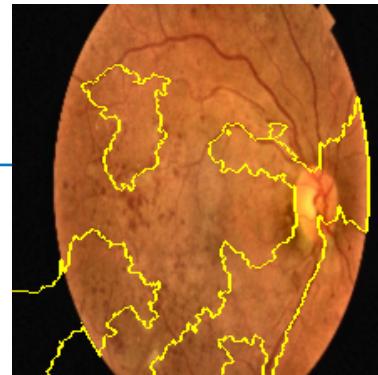
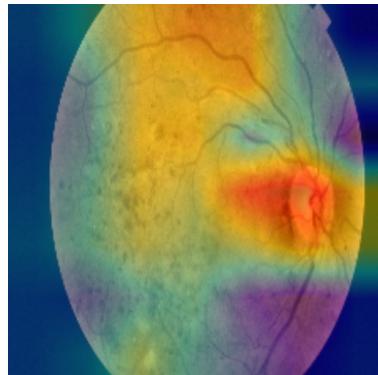
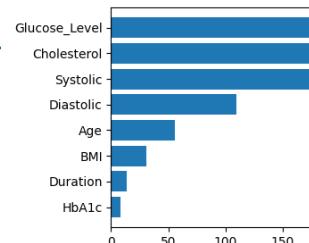




VisionAI



SHAP (Feature Importance)



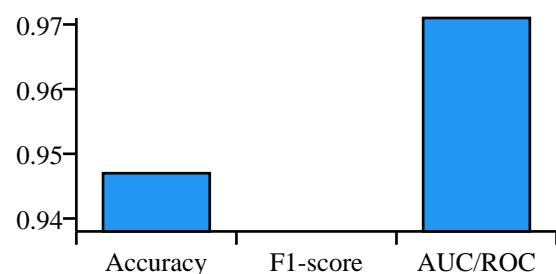
## Lesion Quantification

### Lesion Quantification:

Feature	Percentage
Exudates	19.10%
Hemorrhages	0.33%
Cotton_wool	0.00%
Lesion_percentage	19.43%

## Model Performance Summary

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



## Algorithmic Architecture

Fusion-based ensemble combining EfficientNet-B0, ResNet50, and Vision Transformer backbones, trained using focal loss on retinal image datasets and fused with patient metadata via a RandomForest–XGBoost hybrid classifier for final stage prediction.