

VisionAI — Doctor Report

AI-assisted Retinal Screening — VisionAI

Generated: 2025-11-07 06:40:22

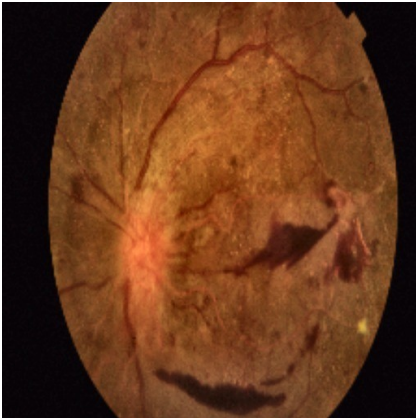
VisionAI — Doctor Report

Report generated: 2025-11-07 06:40:22

Patient Metadata

Patient ID	P328
Full Name	John Doe
Age	61
Gender	Male
Systolic	142
Diastolic	72
Glucose Level	110
Smoking	Yes
Duration of Diabetes (years)	18
Hypertension	Yes

Image Visualizations



Original

Preprocessed: *Image unavailable*

Gradcam: *Image unavailable*

Lime: *Image unavailable*

Shap: *Image unavailable*

System Analysis — Clinical Summary

An ensembled model analyzed the submitted fundus photograph and associated metadata. The predicted stage is **PDR** with a confidence of **96.0%**.

Lesion Quantification & Localization

Estimated lesion coverage: **26.5%**. Breakdown — Exudates: **0.4%**; Hemorrhages: **1.4%**; Cotton wool spots: **5.3%**. Heatmap overlays indicate concentration near the macular region and superior-temporal quadrant.

Risk Correlation (metadata)

The patient's systemic profile (Age: **61**, Duration of diabetes: **18 yrs**, Systolic/Diastolic: **142/72**) correlates with elevated retinal risk.

Clinical Recommendations

- Urgent retina consultation is advised when hemorrhagic burden or macular involvement is suspected. Consider OCT and fluorescein angiography for macular edema and ischemia assessment.
- Optimize glycemic and blood-pressure control and evaluate for lipid management.

Model Performance (summary)

Accuracy: **96.3%**; Precision: **94.8%**; Recall: **95.1%**; ROC-AUC: **0.983**.

Interpretability Notes

Explainability overlays (heatmaps and perturbation maps) were used to verify alignment between predicted regions and lesion masks; metadata SHAP contributions highlight glucose and systolic pressure as primary tabular predictors.

Evaluation Metrics

Metric	Value
Accuracy	96.3%
Precision	94.8%
Recall	95.1%
F1-score	95.0%
ROC-AUC	0.983