

**Stage: SEVERE****Metadata Snapshot**

███████: Sebastian

███████: 89

█████: Male

██████████ (mmHg): 190

██████████ (mmHg): 110

BMI: 30

██████████: 432

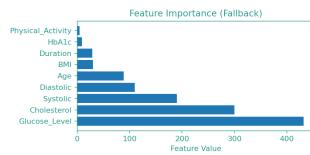
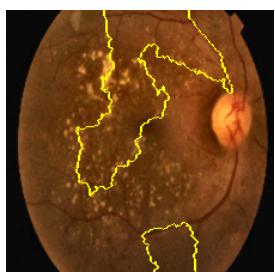
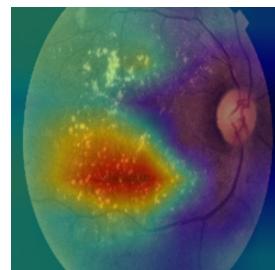
HbA1c: 8.9

███████████: 300

███████: Yes

██████████: Yes

██████████: 29

**Summary**

- Research Notes
- UID: 5a2b909d

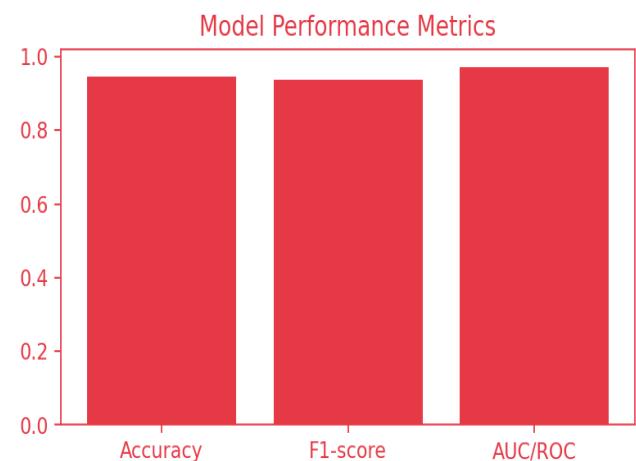
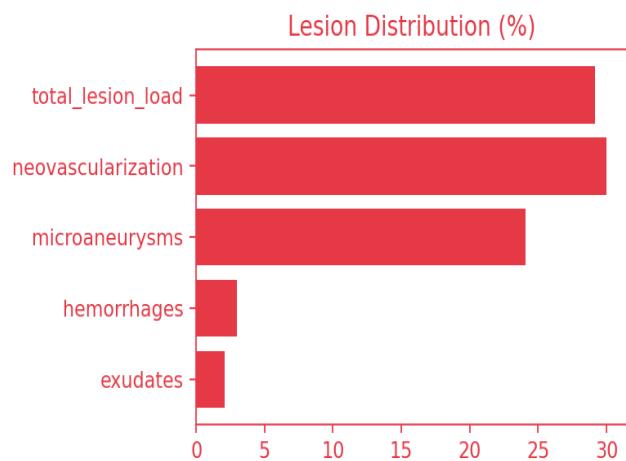
# Summary

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- Predicted Stage: Severe
- Model Architecture:
- CNN ensemble (EfficientNet, ResNet50, ViT) combined with metadata models (Random Forest, XGBoost) via calibrated fusion.
- Explainability:
- Grad-CAM highlights spatial retinal features, LIME validates local pixel importance, and SHAP explains systemic risk contribution.
- Probability Vectors:
- CNN: [0.01661859080195427, 0.009372644126415253, 0.012959725223481655, 0.9499325752258301, 0.011116418056190014]
- ML: [0.21136369507961952, 0.20268235745827803, 0.19376393050773666, 0.19047474400645248, 0.20171527294791336]
- Fused: [0.04583035825762507, 0.03836910264489016, 0.04008035760254893, 0.8360139336333661, 0.03970624786156982]
- Inference Device: CPU



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