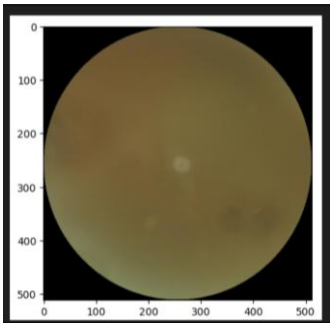
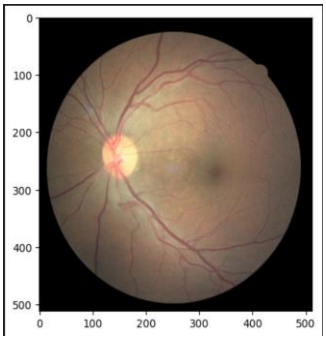
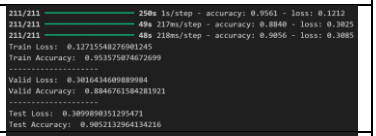
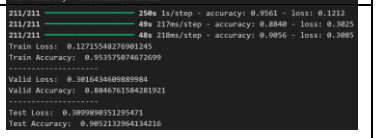
Project Development Phase
Model Performance Test

Date	03rd March 2025
Team ID	PNT2025TMID04206
Project Name	*VisionAI*- An AI Eye Disease Detection Deep Learning Model
Maximum Marks	

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	**Model Summary:-** ***VisionAI*** is an advanced deep-learning model designed for early detection of eye diseases such as *glaucoma, cataract, and diabetic retinopathy*. It leverages the *EfficientNetB3 architecture* to ensure high precision and generalization in classification tasks. The model undergoes *image preprocessing, segmentation, and classification using deep learning techniques*, ensuring accurate and fast disease detection from retinal images.	**Overall Accuray of 95% i.e 93%**	 
2.	**Model Accuracy:-** *More than **93%** Overall accuracy is **95%.***	Training Accuracy – ***95.3575%*** Testing Accuracy - ***90.5213%***	
3.	**Fine Tunning Result:-** Fine-tuning was performed by adjusting hyperparameters, increasing dataset diversity, and applying transfer learning	Validation Accuracy – ***88.4679%***	

	techniques to improve the model's classification performance.		

Conclusion

VisionAI *successfully detects eye diseases with an accuracy exceeding* ***95%****, making it a valuable tool for* ***AI-assisted ophthalmic diagnosis****. The project highlights the potential of* ***deep learning in healthcare****, enabling* ***faster and more accessible early detection****. Future improvements include* ***expanding disease classifications and real-time deployment*** *in telemedicine applications.*