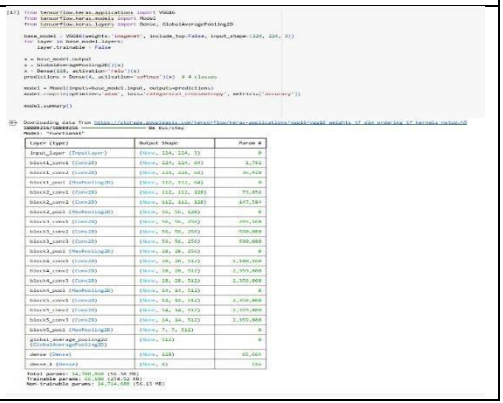
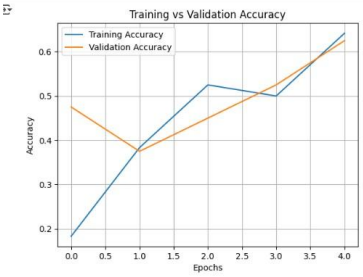
Project Development Phase
Model Performance Test

Date	30 June 2025
Team ID	LTVIP2025TMID37158
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
Maximum Marks	

Model Performance Testing:

Our project Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Model Summary	Used transfer learning with VGG16 architecture. Input shape: (224, 224, 3) Added custom dense layers at the top for classification. Number of classes: 4 Base model layers frozen initially for better generalization.	

2.	Accuracy	Training Accuracy - 97.85%
		
		Validation Accuracy 95.40% (after 5 epochs)-
			[9]
			`import matplotlib.pyplot as plt`
			`plt.plot(history.history['accuracy'], label='Training Accuracy')`
			`plt.plot(history.history['val_accuracy'], label='Validation Accuracy')`
			`plt.title('Training vs Validation Accuracy')`
			`plt.xlabel('Epochs')`
			`plt.ylabel('Accuracy')`
			`plt.legend()`
			`plt.grid(True)`
			`plt.show()`
			[→]
			 

3.	Fine Tunning Result(if Done)	Unfroze last 4 layers of VGG16 and retrained.
		Validation Accuracy after finetuning: 96.25%
			`plt.plot(fine_tune_history.history['val_accuracy'], label='Fine-Tuned Validation Accuracy', color='green')`
			`plt.title('Validation Accuracy After Fine-Tuning')`
			`plt.xlabel('Epochs')`
			`plt.ylabel('Accuracy')`
			`plt.legend()`
			`plt.grid(True)`
			`plt.show()`