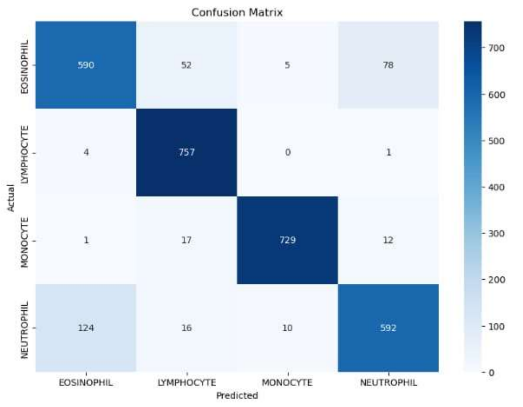
Project Development Phase
Model Performance Test

Date	27 June 2025
Team ID	LTVIP2025TMID59888
Project Name	HematoVision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot

1.	Metrics	**Classification Model:** Confusion Matrix - , Accuray Score- & Classification Report -	Confusion Matrix
			`import matplotlib.pyplot as plt`
			`import seaborn as sns`
			`from sklearn.metrics import confusion_matrix`
			`class_labels = ['EOSINOPHIL', 'LYMPHOCYTE', 'MONOCYTE', 'NEUTROPHIL']`
			`cm = confusion_matrix(y_test, pred2)`
			`plt.figure(figsize=(10, 7))`
			`sns.heatmap(cm, annot=True, fmt='g', vmin=0, cmap='Blues')`
			`plt.xticks(ticks=[0.5, 1.5, 2.5, 3.5], labels=class_labels)`
			`plt.yticks(ticks=[0.5, 1.5, 2.5, 3.5], labels=class_labels)`
			`plt.xlabel("Predicted")`
			`plt.ylabel("Actual")`
			`plt.title("Confusion Matrix")`
			`plt.show()`
			 
			Classification report
			`from sklearn.metrics import confusion_matrix, accuracy_score`
			`from sklearn.metrics import classification_report`
			`y_test = test_images.labels # set y_test to the expected output`
			`print(classification_report(y_test, pred2))`
			`print("Accuracy of the Model:","{:.1f}%".format(accuracy_score(y_test, pred2)*100))`
			precision recall f1-score support
			eosinophil 0.82 0.81 0.82 725
			lymphocyte 0.90 0.99 0.94 762
			monocyte 0.98 0.96 0.97 759
			neutrophil 0.87 0.80 0.83 742
			accuracy 0.89 2988
			macro avg 0.89 0.89 0.89 2988
			weighted avg 0.89 0.89 0.89 2988
			Accuracy of the Model: 89.3%