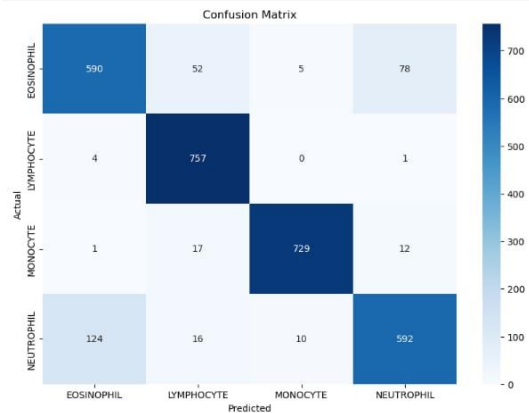


Project Development Phase
Model Performance Test

Date	27 June 2025
Team ID	LTVIP2025TMID59868
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 - , Accuracy Score- & Classification Report -	<div>Confusion Matrix</div> <pre>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()</pre>  <table><tr><th></th><th>Eosinophil</th><th>Lymphocyte</th><th>Monocyte</th><th>Neutrophil</th></tr><tr><th>Eosinophil</th><td>590</td><td>52</td><td>5</td><td>78</td></tr><tr><th>Lymphocyte</th><td>4</td><td>757</td><td>0</td><td>1</td></tr><tr><th>Monocyte</th><td>1</td><td>17</td><td>729</td><td>12</td></tr><tr><th>Neutrophil</th><td>124</td><td>16</td><td>10</td><td>592</td></tr></table> <div>Classification report</div> <pre>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, pre</pre> <table><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr><tr><td>eosinophil</td><td>0.82</td><td>0.81</td><td>0.82</td><td>725</td></tr><tr><td>lymphocyte</td><td>0.90</td><td>0.99</td><td>0.94</td><td>762</td></tr><tr><td>monocyte</td><td>0.98</td><td>0.96</td><td>0.97</td><td>759</td></tr><tr><td>neutrophil</td><td>0.87</td><td>0.80</td><td>0.83</td><td>742</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.89</td><td>2988</td></tr><tr><td>macro avg</td><td>0.89</td><td>0.89</td><td>0.89</td><td>2988</td></tr><tr><td>weighted avg</td><td>0.89</td><td>0.89</td><td>0.89</td><td>2988</td></tr></table> <div>Accuracy of the Model: 89.3%</div>		Eosinophil	Lymphocyte	Monocyte	Neutrophil	Eosinophil	590	52	5	78	Lymphocyte	4	757	0	1	Monocyte	1	17	729	12	Neutrophil	124	16	10	592		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
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