

Project Development Phase Model Performance Test

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| Date | 10 January 2026 |
| Team ID | LTVIP2025TMIDS66117 |
| Project Name | Hematovision: advanced blood cell classification using transfer learning |
| Maximum Marks | |

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

| S.No. | Parameter | Values | Screenshot |
|-------|-------------------------------|--|---|
| 1. | Model Summary | Model: MobileNetV2 (Transfer Learning) with an added Dense layer. Total parameters: 2,586,948. Trainable parameters: 328,964. Non-trainable parameters: 2,257,984. | <pre> History = ModelHistory: epochs: validating_loss: Epoch 11/15: loss: 0.8930 accuracy: 0.8930 val_loss: 0.8146 val_accuracy: 0.8146 Epoch 12/15: loss: 0.8930 accuracy: 0.8930 val_loss: 0.8146 val_accuracy: 0.8146 Epoch 13/15: loss: 0.8930 accuracy: 0.8930 val_loss: 0.8146 val_accuracy: 0.8146 Epoch 14/15: loss: 0.8930 accuracy: 0.8930 val_loss: 0.8146 val_accuracy: 0.8146 Epoch 15/15: loss: 0.8930 accuracy: 0.8930 val_loss: 0.8146 val_accuracy: 0.8146 Total params: 2,586,948 Trainable params: 328,964 Non-trainable params: 2,257,984 Total estimated size: 10.4 MB </pre> |
| 2. | Accuracy | Training Accuracy – 0.89.3 (from Epoch 12/15) Validation Accuracy - 0.81462 (from Epoch 12/15) | <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: {}".format(accuracy_score(y_test, pred2)*100)) precision recall f1 score support reticuloph1 0.87 0.81 0.84 775 leukocyte 0.90 0.89 0.89 762 monocyte 0.96 0.96 0.96 770 neutrophil 0.87 0.80 0.83 742 accuracy 0.89 0.89 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% </pre> |
| 3. | Fine Tunning Result(if Done) | Validation Accuracy - Fine-tuning of the pre-trained MobileNetV2 base model was not performed. Only the newly added dense layer was trained. | <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: {}".format(accuracy_score(y_test, pred2)*100)) precision recall f1 score support reticuloph1 0.87 0.81 0.84 775 leukocyte 0.90 0.89 0.89 762 monocyte 0.96 0.96 0.96 770 neutrophil 0.87 0.80 0.83 742 accuracy 0.89 0.89 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% </pre> |