9.2 – Disadvantages

• Model accuracy highly depends on the quality and size of the training dataset.

• Similar-looking dog breeds may lead to misclassification.

• Performance may decrease if the uploaded image has poor lighting, low resolution, or unclear background.

• Transfer learning models may not perfectly adapt if the dataset differs significantly from datasets such as ImageNet.

• Requires computational resources (CPU/GPU) for training and efficient deployment.

• Large pre-trained models increase storage requirements.

• Prediction accuracy may reduce when dealing with mixed-breed dogs.

• Overfitting may occur if the model is not properly regularized or trained with sufficient data augmentation.

• Requires periodic retraining to improve performance with new data.

• Web application performance may slow down under heavy user traffic.

• Dependency on external deep learning frameworks and libraries.

• Initial setup and environment configuration can be complex for beginners.