

Multi-class, Multi-label, ROC Curve

Multi-Class Classification

- Task with more than two labels.
- Assumption: each sample assigned to only one label.

Multi-Label

- Assigns to each sample a set of target labels.
- E.g. same text include topics like education, politics, religion etc.

Receiver Operating Characteristic (ROC) metric is usually used to evaluate the quality of classifier's output. In the ROC curve, true positive rate places on the Y-axis and on the other hand false positive rate places on the X-axis. This denotes that the top left corner of the plot is the ideal point because here FPR is lowest, and TPR is highest. This is not very practical, but it does indicate that a larger AUC is usually better. From Fig. 4, we can see that the ROC of MobileNet with transfer learning approaches has larger AUC than others which indicates that this approach is working better here.

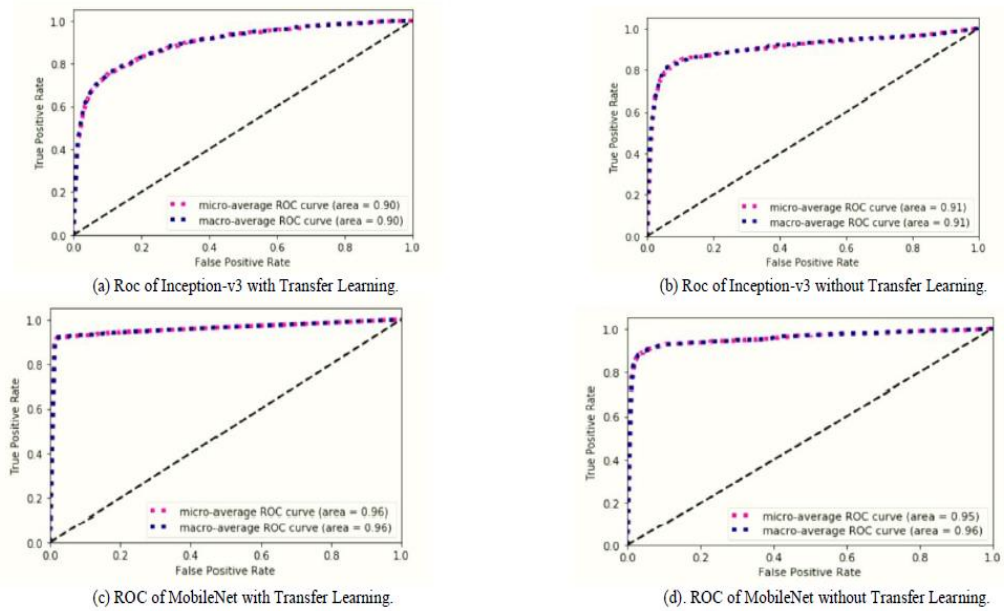


Fig. 4. ROC Curve of Four different Approaches.