

Conclusion:

The classification report shows that the model performs well on normal lung tissue (**lung_n**) with high precision and recall resulting in a strong F1-score. However it struggles with **lung_aca** (lung adenocarcinoma) and **lung_scc** (lung squamous cell carcinoma) particularly in terms of recall.

Overall the model has an accuracy of 0.86, macro of 0.86 and weighted average F1-scores of 0.86. It tells us that model can be improved in handling imbalanced classes and enhancing performance across all categories.

	precision	recall	f1-score	support
lung_aca	0.71	0.93	0.81	987
lung_n	0.97	0.94	0.95	977
lung_scc	0.95	0.70	0.81	1036
accuracy			0.86	3000
macro avg	0.88	0.86	0.86	3000
weighted avg	0.88	0.86	0.86	3000