

Table 5. Performance Metrics of Ensemble Model

Class	Precision		Recall		F1-score	
	AE	WAE	AE	WAE	AE	WAE
colon_aca	0.95	1.00	0.81	1.00	0.87	1.00
colon_n	0.83	1.00	1.00	1.00	0.91	1.00
lung_aca	0.74	0.99	0.94	1.00	0.83	0.99
lung_n	0.99	1.00	0.97	1.00	0.98	1.00
lung_scc	0.97	1.00	0.69	0.99	0.81	1.00

7. Conclusion

We suggested an ensemble approach for the identifying and classifying the lung and colon cancer datasets in this research. The ensemble model is constructed with the DenseNet201, InceptionV3, and ResNet50. AE and WAE are used to integrate the calculation of the base learners. AE involves combining for estimation and taking an average to determine the final prediction. Whereas in WAE, each base learner is assigned a weight based on its performance. Base learners with higher accuracy are given more weight than other models. The findings of the experiment reveal that the WAE outperforms the AE. The AE achieved 98.66% accuracy, while the WAE achieved 99.80% which is better than all the existing models.

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