Facial Emotion Recognition

RDBMS IA2

1911001 - Aakash Saroop

Research paper model without Gabor filter

	precision	recall	f1-score	support
0	0.00	0.00	0.00	496
1	0.37	1.00	0.54	899
2	0.00	0.00	0.00	608
3	0.00	0.00	0.00	400
accuracy			0.37	2403
macro avg	0.09	0.25	0.14	2403
weighted avg	0.14	0.37	0.20	2403

Research paper model with Gabor filter

	precision	recall	f1-score	support
0	0.00	0.00	0.00	496
1	0.37	1.00	0.54	899
2	0.00	0.00	0.00	608
3	0.00	0.00	0.00	400
accuracy			0.37	2403
macro avg	0.09	0.25	0.14	2403
weighted avg	0.14	0.37	0.20	2403

Kaggle model without Gabor Filter

	precision	recall	f1-score	support
0	0.74	0.70	0.72	496
1	0.91	0.92	0.91	899
2	0.76	0.81	0.78	608
3	0.89	0.84	0.87	400
accuracy			0.83	2403
macro avg	0.83	0.82	0.82	2403
weighted avg	0.83	0.83	0.83	2403

Kaggle model with Gabor Filter

	precision	recall	f1-score	support
0	0.74	0.73	0.73	496
1	0.92	0.89	0.90	899
2	0.76	0.77	0.76	608
3	0.85	0.90	0.87	400
accuracy			0.83	2403
macro avg	0.82	0.82	0.82	2403
weighted avg	0.83	0.83	0.83	2403

Comparison

Model	Gabor filter used?	Accuracy
Research paper	Yes	37%
Research paper	No	37%
Kaggle	Yes	83%
Kaggle	No	83%

Conclusion

- As anticipated, the model presented in the paper relies on overfitting on the small dataset and gives only training set accuracy.
- This gives a deceptively great accuracy of 90%.
- The model presented in the paper gives an accuracy of only 37% and classifies all the images as one emotion.
- There is no significant change in performance of any model after applying the Gabor filters.