



Training and Testing Report

SERvis
ME781 Course Project
Group 29

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Libraries and Modules Used

Libraries

- Numpy
- Seaborn
- Matplotlib
- Librosa
- Pickle
- Scikit-learn
- Keras

Modules

- IPython display
- Pydub



Datasets

Click [here](#) for more details about datasets and models

- Surrey Audio-Visual Expressed Emotion (**SAVEE**)
- Ryerson Audio-Visual Database of Emotional Speech and Song (**RAVDESS**)
- Toronto emotional speech set (**TESS**)
- Crowd-sourced Emotional Multimodal Actors Dataset (**CREMA-D**)



Model Summary

1-D CNN

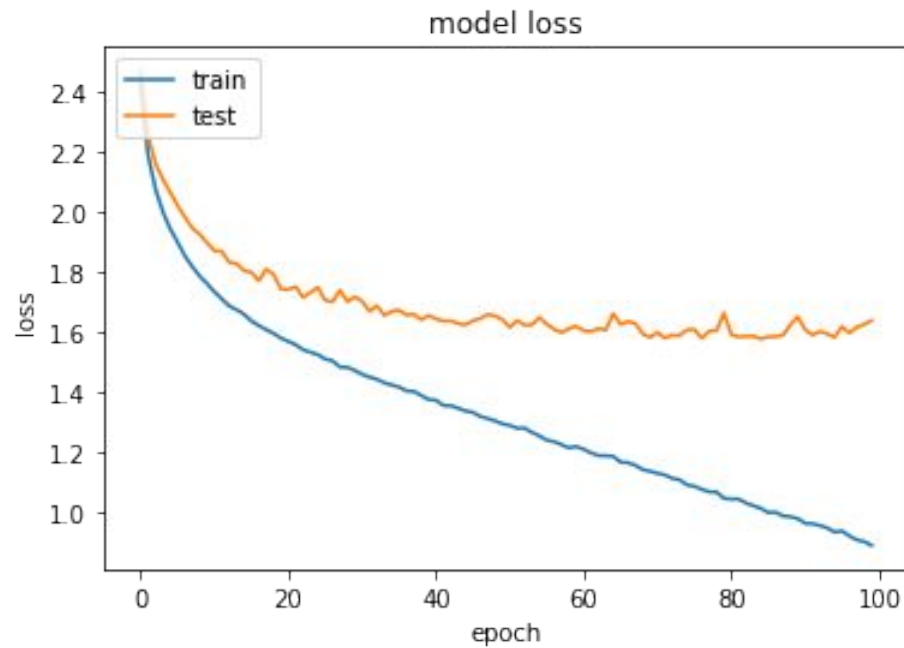
```
=====
Total params: 1,285,390
Trainable params: 1,284,622
Non-trainable params: 768
=====
```


Train : Test Split

3:1 (0.75:0.25)

Loss Function

Categorical Cross Entropy





Classification Report

For Baseline Model

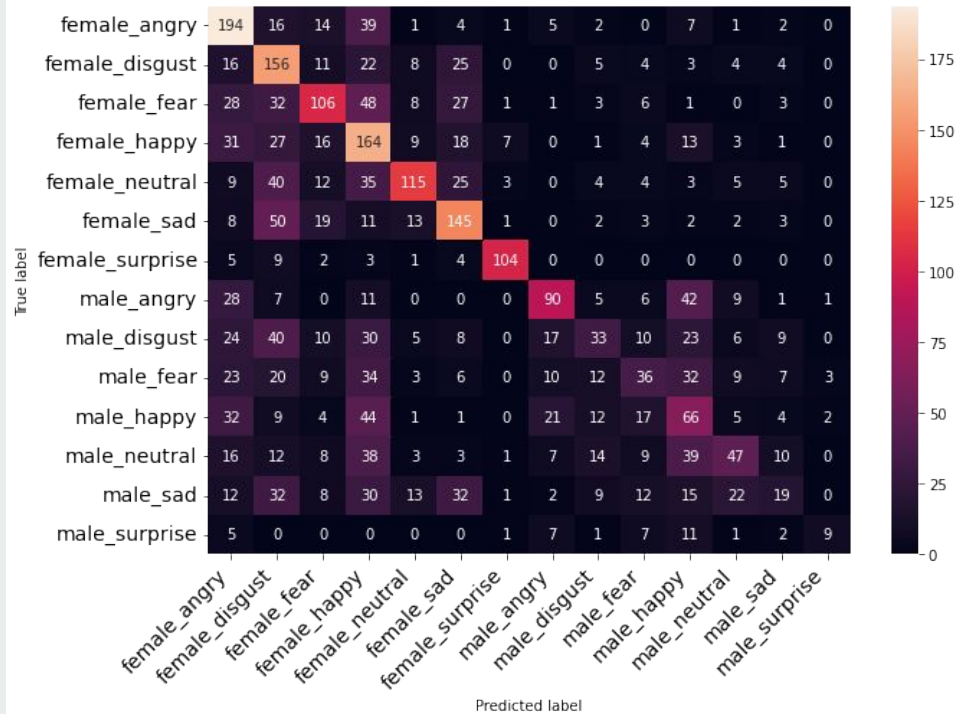
	precision	recall	f1-score	support
female_angry	0.45	0.68	0.54	286
female_disgust	0.35	0.60	0.44	258
female_fear	0.48	0.40	0.44	264
female_happy	0.32	0.56	0.41	294
female_neutral	0.64	0.44	0.52	260
female_sad	0.49	0.56	0.52	259
female_surprise	0.87	0.81	0.84	128
male_angry	0.56	0.45	0.50	200
male_disgust	0.32	0.15	0.21	215
male_fear	0.31	0.18	0.22	204
male_happy	0.26	0.30	0.28	218
male_neutral	0.41	0.23	0.29	207
male_sad	0.27	0.09	0.14	207
male_surprise	0.60	0.20	0.31	44
accuracy			0.42	3044
macro avg	0.45	0.40	0.40	3044
weighted avg	0.43	0.42	0.41	3044

Confusion Matrix

Heat Maps

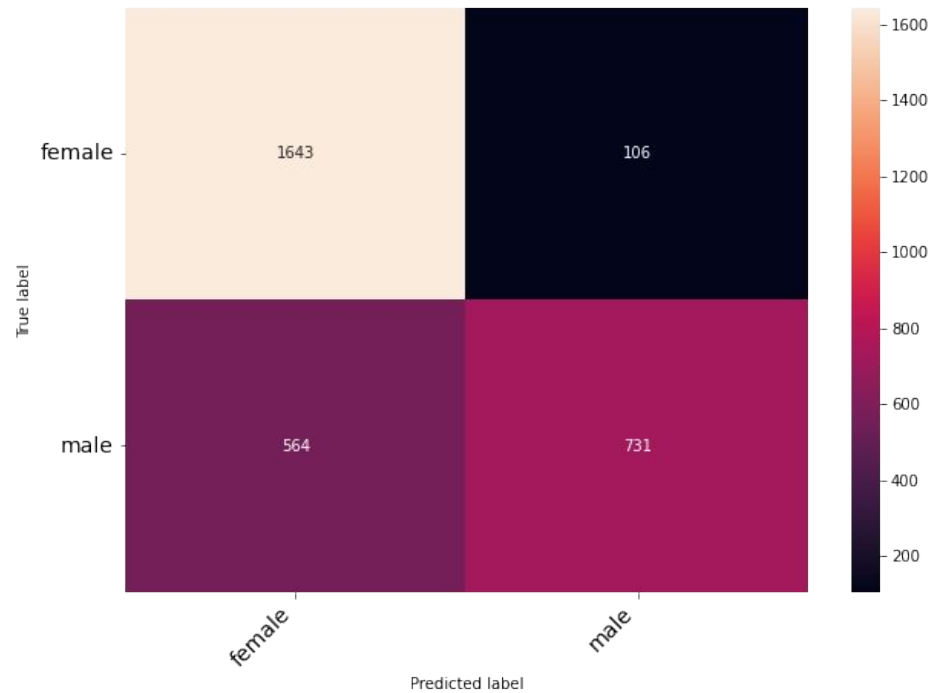
Emotion by Gender Accuracy

Accuracy : 42.18%



Gender Accuracy

Accuracy : 77.99%



Emotion Accuracy

Accuracy : 48.55%

