

Experiment Result Summary

MEASURES CLASSIFIER	Accuracy	Precision	Recall (SST)	F- Measure	Specificity	ROC	MCC
Convolutional Neural Network model	0.9803	0.9873	0.9813	0.99	0.6	0.945	0.6428
Support Vector Machine(SVM)- rbf	0.9688	0.97	1	0.98			
Support Vector Machine-Linear	0.73	0.96	0.75	0.84	0.118	0.753	

CNN confusion matrix

$$\begin{pmatrix} 50436 & 382 \\ 646 & 960 \end{pmatrix}$$

$$\text{Accuracy} = (\text{TP} + \text{TN}) / (\text{TP} + \text{TN} + \text{FP} + \text{FN})$$

$$\text{Precision} = \text{TP} / (\text{TP} + \text{FP})$$

$$\text{Recall} = \text{TP} / (\text{TP} + \text{FN})$$

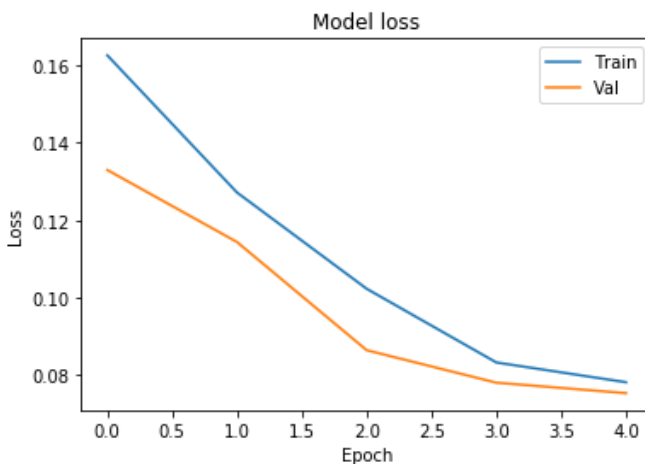
$$\text{F-measure} = 2 \text{ TP} / (2 \text{ TP} + \text{FP} + \text{FN})$$

$$\text{Specificity} = \text{TN} / (\text{TN} + \text{FP})$$

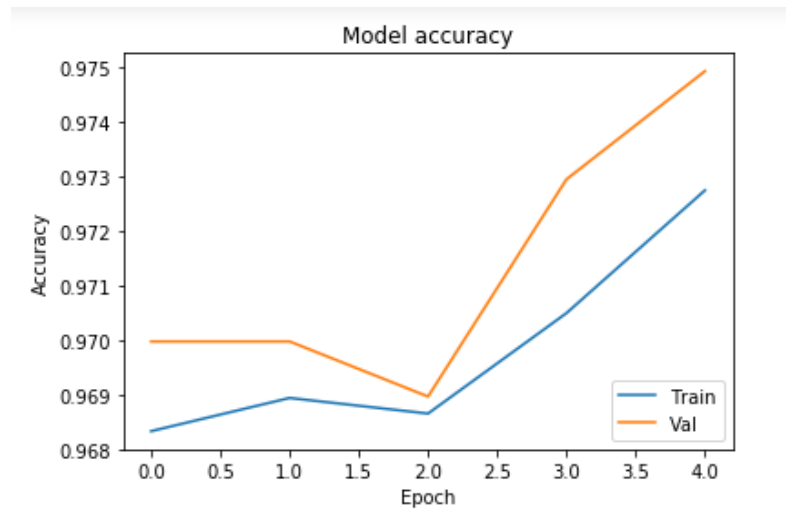
Matthews Correlation Coefficient

$$\text{MCC} = (\text{TP} \times \text{TN}) - (\text{FP} \times \text{FN}) / \sqrt{[(\text{TP} + \text{FP})(\text{TP} + \text{FN})(\text{TN} + \text{FP})(\text{TN} + \text{FN})]}$$

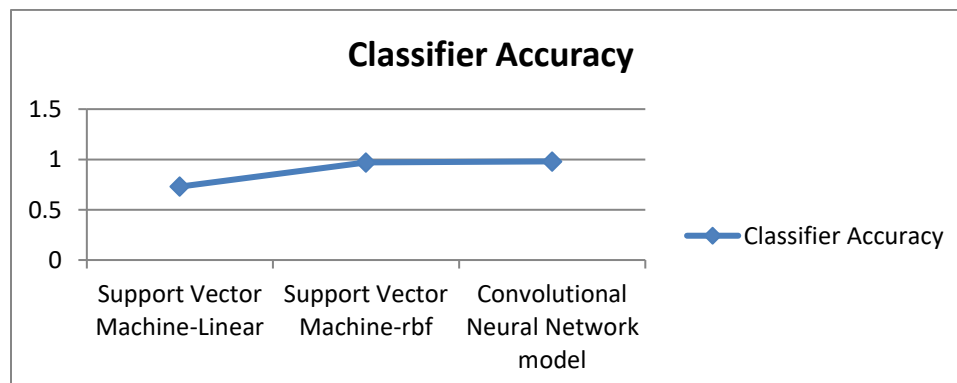
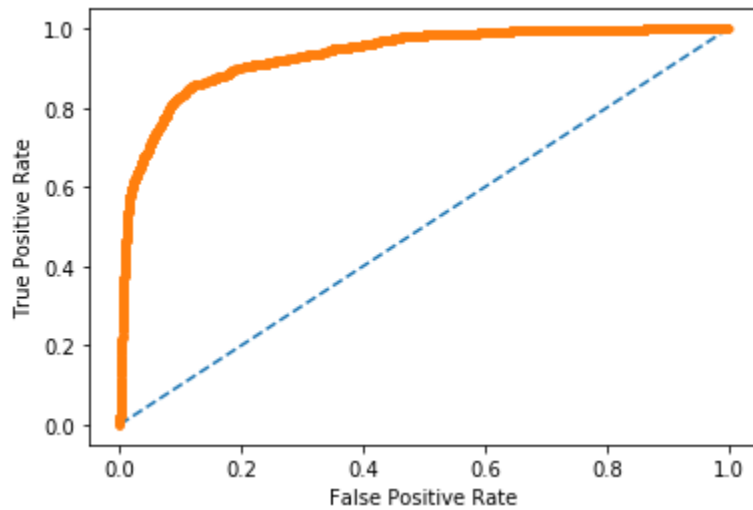
Model Loss



Model Accuracy



ROC curve



Classifier Specificity

