MODULE 3

Table below lists the different configurations and results obtained for MovieReview.py

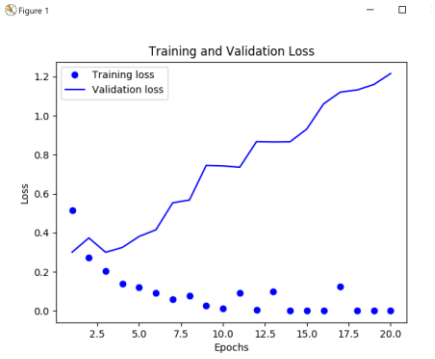
ARCHITECTURE	ACTIVATION FUNCTION	LOSS FUNCTION	TRAINING LOSS	VALIDATION LOSS	TRAINING ACCURACY	VALIDATION ACCURACY	RESULT
2 hidden layers, 16 neurons each	Relu	Binary_crossentropy	0.0011	1.1164	0.9815	0.8700	87.36 Epoch-4
2 hidden layers, 16 neurons each	Tanh	Binary_crossentropy	0.0817	0.7205	0.9875	0.8696	83.65 Epoch-3
2 hidden layers, 16 neurons each	Relu	mse	0.0024	0.1170	0.9975	0.8707	87.47 Epoch-2
2 hidden layers, 32 neurons each	Relu	Binary_crossentropy	0.3546	1.2879	0.9799	0.8656	79.99 Epoch-4
2 hidden layers, 8 neurons each	Relu	Binary_crossentropy	0.0785	1.1758	0.9895	0.8597	87.93 Epoch-2
1 hidden layer, 16 neurons	Relu	Binary_crossentropy	0.0620	0.99	1.0069	0.8597	88.71 Epoch-2
3 hidden layers, 16 neurons each	Relu	Binary_crossentropy	0.0022	1.0903	0.9991	0.8689	87.58 Epoch-2

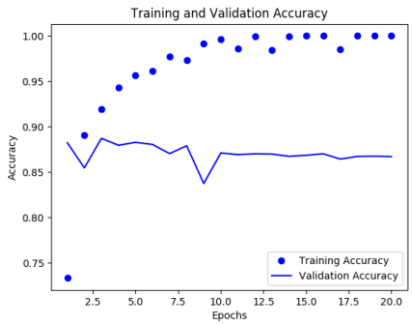
NOTE : Training/Validation Loss and Training/Validation Accuracy is the obtained values at the end of 20th training epoch.

Result is based on the final retrained network run on test set after training for as many epochs as needed based on training/validation metrics.

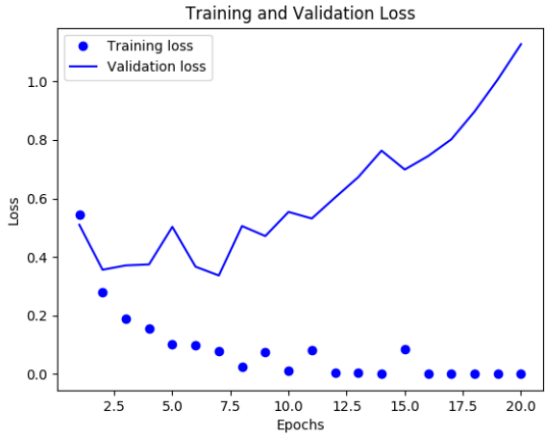
Graphs below show the training and validation accuracy and loss plots at the end of the 20th training epoch for each of the above architectures.

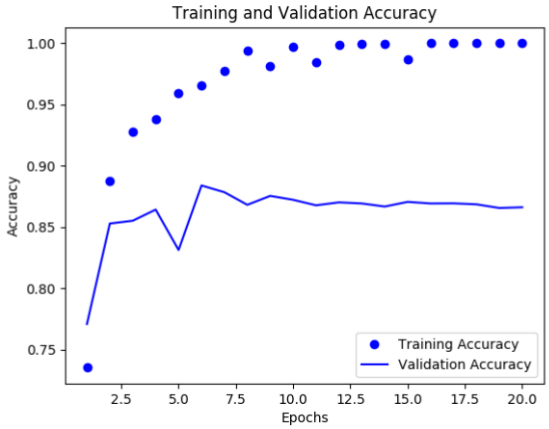
2 hidden layers, 16 neurons each



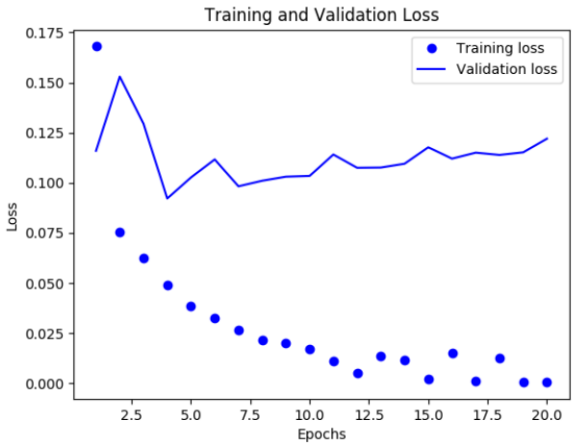


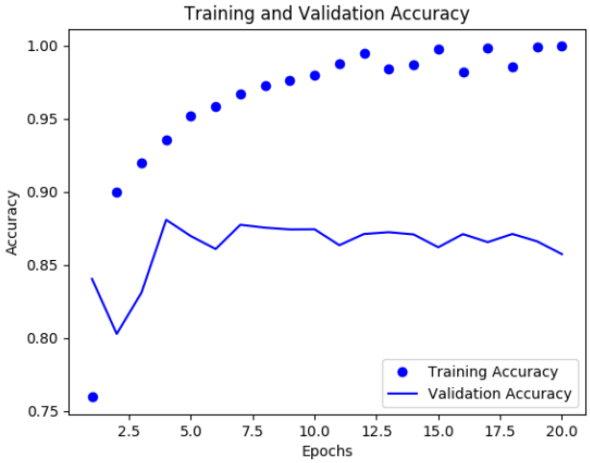
2 hidden layers, 16 neurons each, tanh



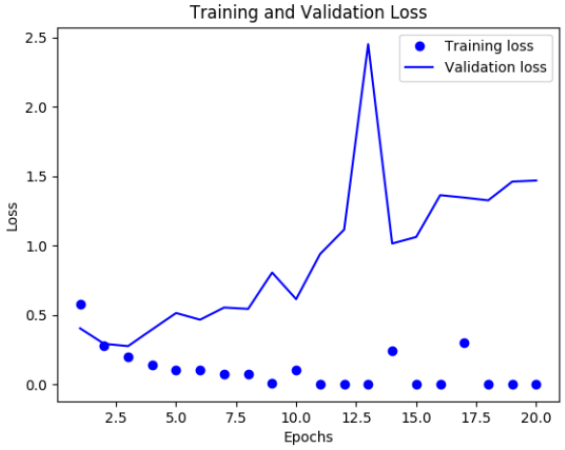


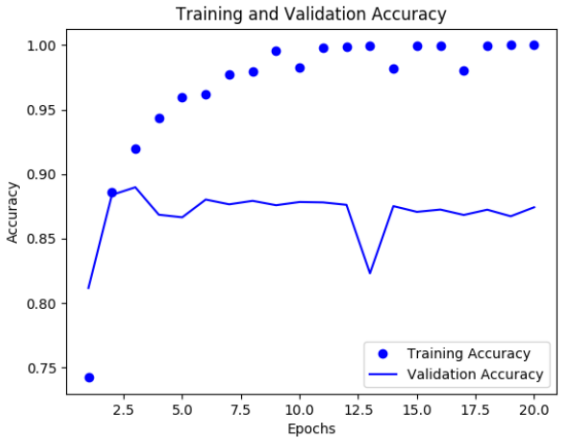
2 hidden layers, 16 neurons each, mse



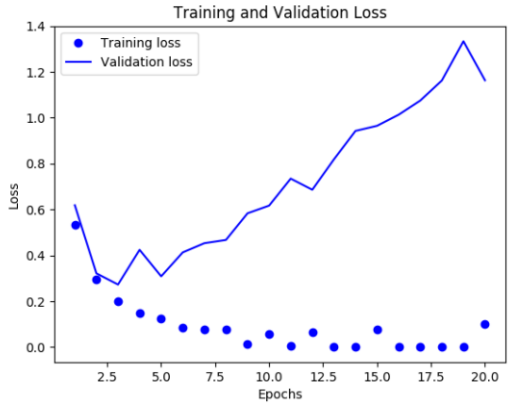


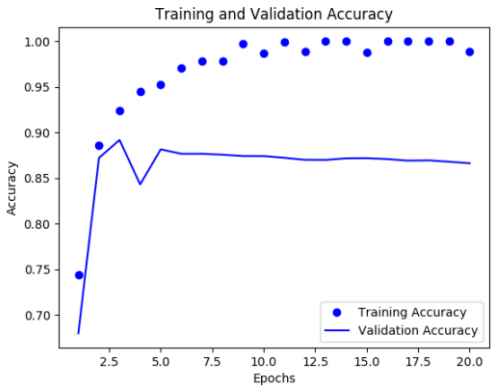
2 hidden layers, 32 neurons each



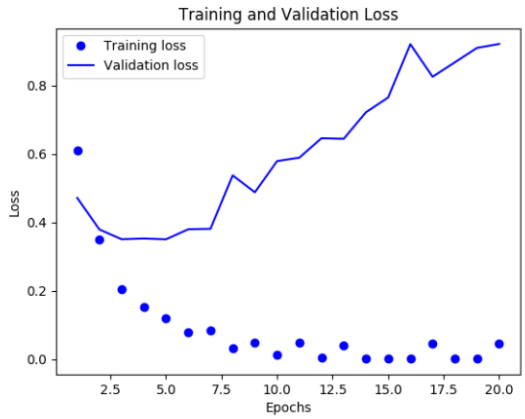


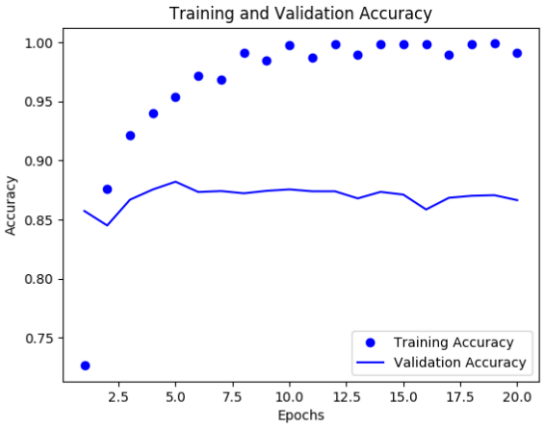
2 hidden layers, 8 neurons each





1 hidden layer, 16 neurons





3 hidden layers, 16 neurons each