MODULE 3

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

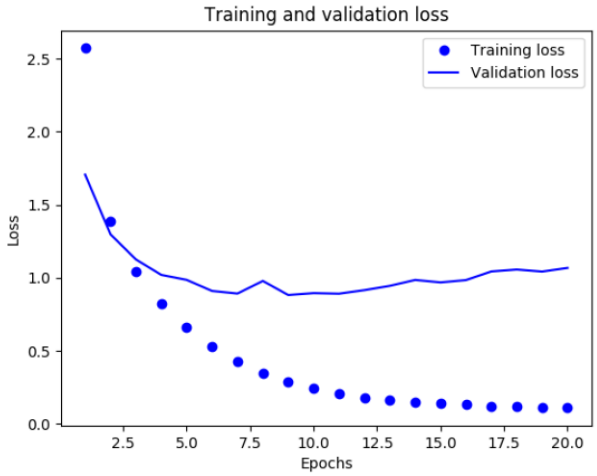
ARCHITECTURE	ACTIVATION FUNCTION	LOSS FUNCTION	TRAINING LOSS	VALIDATION LOSS	TRAINING ACCURACY	VALIDATION ACCURACY	RESULT
2 hidden layers 64 neurons each	relu	Categorical_crossentropy	0.1133	1.052	0.9558	0.8060	78.14 Epochs-8
2 hidden layers 32 neurons each	relu	Categorical_crossentropy	0.1579	0.969	0.9549	0.8150	77.78 Epochs-11
2 hidden layers 128 neurons each	relu	Categorical_crossentropy	0.1014	1.047	0.9584	0.8050	77.78 Epochs-5
1 hidden layer of 64 neurons	relu	Categorical_crossentropy	0.1093	0.936	0.9575	0.8120	78.85 Epochs-9
3 hidden layers of 64, 40, 5 neurons	relu	Categorical_crossentropy	0.4522	1.540	0.8670	0.7180	70.88 Epochs-10

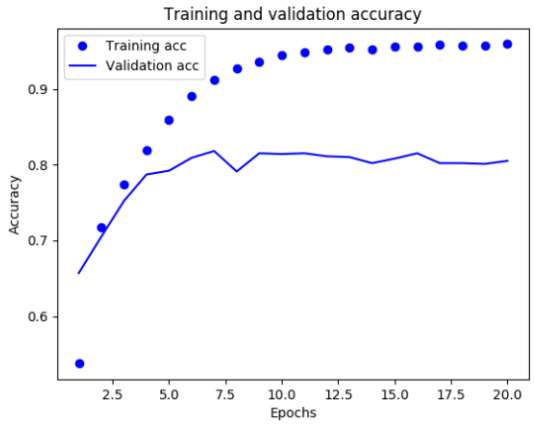
NOTE : Training/Validation Loss and Training/Validation Accuracy is the obtained values at the end of 20th training epoch.

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.

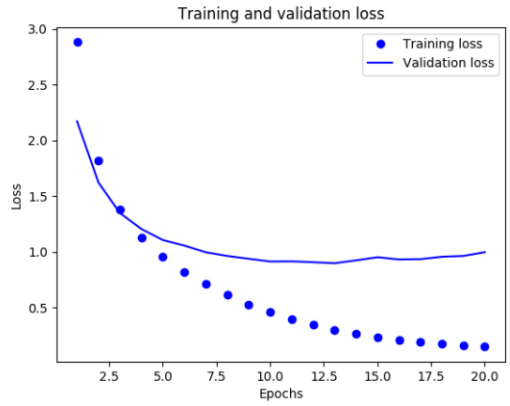
Graphs below show the training/validation loss and accuracy plots at the end of the 20th training epoch for each of the above architectures

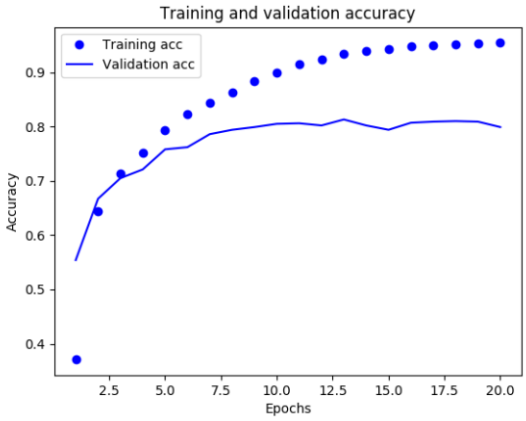
2 hidden layers 64 neurons each



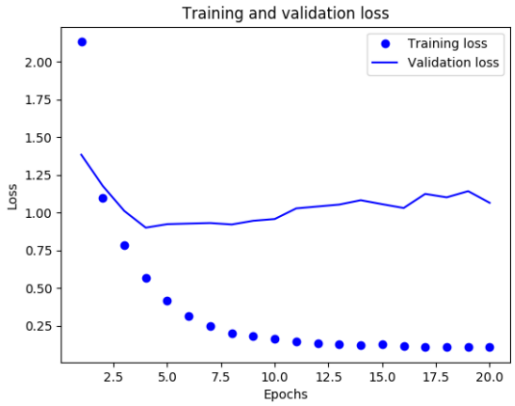


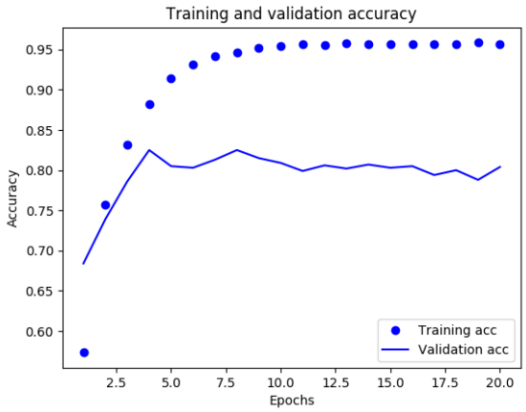
2 hidden layers 32 neurons each



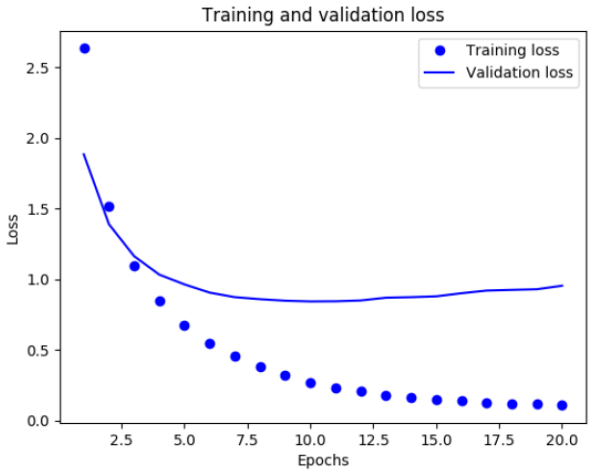


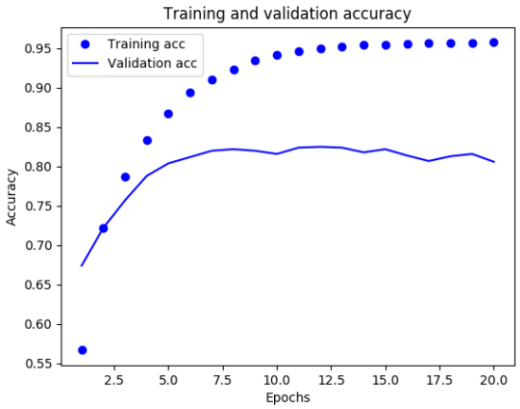
2 hidden layers 128 neurons each





1 hidden layer of 64 neurons





3 hidden layers of 64, 40, 5 neurons