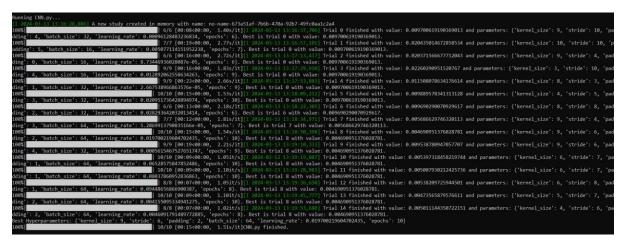
Report DL-Week 1(23CS60R53):

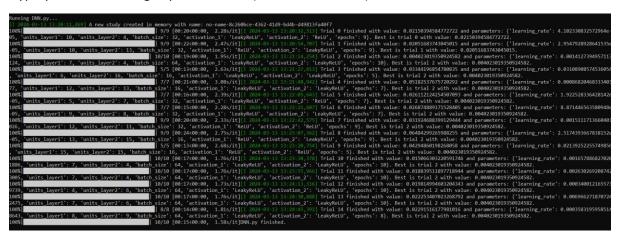
https://drive.google.com/drive/folders/1SZQZWHoh FgeilLf5Sq6c b7xeKvdJi9?usp=sharing

Used Optum for hyperparameter tuning and saved the model state in a dictionary of the model with the least validation loss. Evaluate.py takes this dictionary and Creates an instance of the model class with the saved state and performs evaluation.

Hyperparameter Tuning Report For CNN (On Validation Loss):



Hyperparameter Tuning Report For DNN (On Validation Loss):



Hyperparameter Tuning Report For LSTM (On Validation Loss):

Rouning LSTM.py...

[2003.001.31.35.50.300] A new study created in memory with name: no.name-550eb12.8199.45f6.8047.c0304f04f336
[2003.001.31.35.50.300] Nil O finished with value: 0.01894555277953487 and parameters: ('hidden_size': 127, 'num_layers': 1, 'learning_rate': 0.0027717967247789604, 'epochs': 9, 'batch_size': 16). Best is trial 0 with value: 0.01894585277955487. [12044-03.13 1325:10.30] Trial 1 finished with value: 0.0205045491331076 and parameters: ('hidden_size': 78, 'num_layers': 1, 'learning_rate': 0.003679293079806905, 'epochs': 9, 'batch_size': 16). Best is trial 2 with value: 0.01894585277955487. [12044-03.13 1325:04.30] Trial 2 finished with value: 0.01014051632134528 and parameters: ('hidden_size': 78, 'num_layers': 2, 'learning_rate': 0.0004718817813337514, 'epochs': 7, 'batch_size': 32). Best is trial 3 with value: 0.01014051602813433. [12044-03.13 1325:04.30] Trial 3 finished with value: 0.011190772218243132 and parameters: ('hidden_size': 102, 'num_layers': 3, 'learning_rate': 0.00047180610078494205, 'epochs': 6, 'batch_size': 32). Best is trial 3 with value: 0.01014051602813433. [12044-03.13 1225:04.30] Trial 4 finished with value: 0.004962209920013918 and parameters: ('hidden_size': 102, 'num_layers': 2, 'learning_rate': 0.0652228356561837, 'epochs': 7, 'batch_size': 64). Best is trial 3 with value: 0.01014051602813433. [12044-03.13 1225:05.03] Trial 5 finished with value: 0.004062209920013918 and parameters: ('hidden_size': 76, 'num_layers': 2, 'learning_rate': 0.0652228356561837, 'epochs': 7, 'batch_size': 64). Best is trial 5 with value: 0.00406220901018. [12044-03.13 1225:05.03] Trial 5 finished with value: 0.00406220945074580145574758014557475101 and parameters: ('hidden_size': 102, 'num_layers': 2, 'learning_rate': 0.0652283580660823417, 'epochs': 7, 'batch_size': 16). Best is trial 5 with value: 0.00406209001018. [12044-03.13 1225:05.03] Trial 5 finished with value: 0.004062090509050018. [12044-03.13 1225:05.03] Trial 5 finished with value: 0.0040620905000182344 and parameters: (

Evaluation Report:

Classificatio				
	precision	recall	f1-score	support
fake	0.94	0.89	0.92	496
real	0.91	0.95	0.93	564
accuracy			0.93	1060
macro avg	0.93	0.92		1060
weighted avg		0.93		
weighted avg	0.55	0.55	0.93	1000
Classification Report for CNN:				
Classificatio			C1	
	precision	recall	f1-score	support
6.1	0.00	0.04	0.05	406
fake	0.80	0.91		496
real	0.91	0.80	0.85	564
accuracy			0.85	1060
macro avg	0.86	0.85	0.85	1060
weighted avg	0.86	0.85	0.85	1060
Classification Report for LSTM:				
	precision		f1-score	support
fake	0.89	0.71	0.79	496
real	0.79	0.93		564
accuracy			0.83	1060
macro avg	0.84	0.82		
weighted avg		0.83	0.82	1060
	0.01	0.05	0.02	1000