



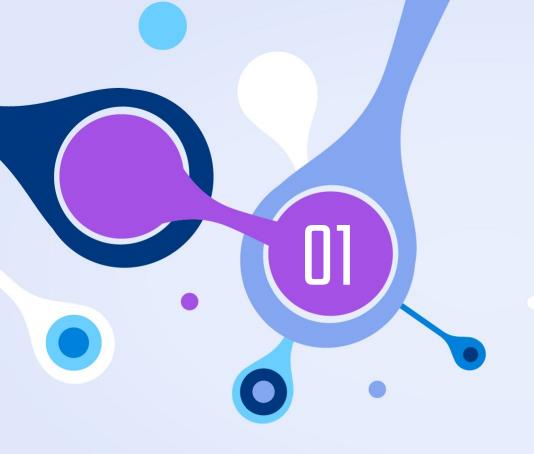
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### WORKFLOW



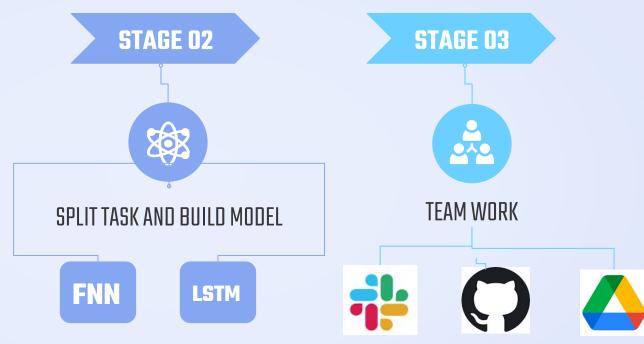
#### DATA PREPARATION

Number of data = 500 1-100,2-101,3-102...

400 series

100 timesteps

5 variables



### **FNN Model**



#### **Specify Architecture**

**INPUTS** 

'sku' 'price' 'order' 'duration' 'category' HIDDEN

units=100 activation='relu' **OUTPUTS** 

'quantity' units=1 activation='linear''

# LSTM MODEL



#### **Specify Architecture**

**INPUTS** 

shape=(None, nbrvariables) **LSTM** 

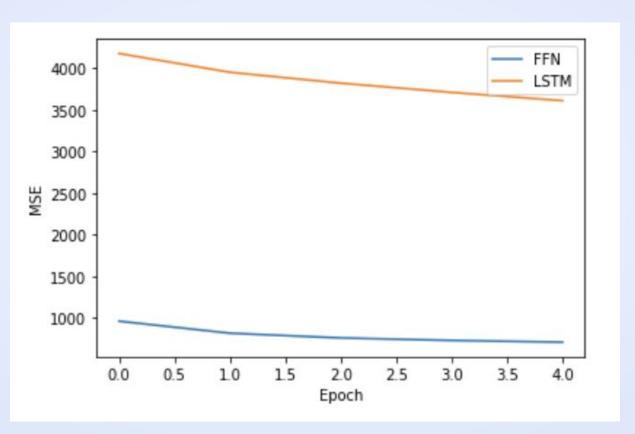
units=nbrvariables +4 return\_sequences =True **OUTPUTS** 

'quantity' units=1 activation='linear''



## Comparison

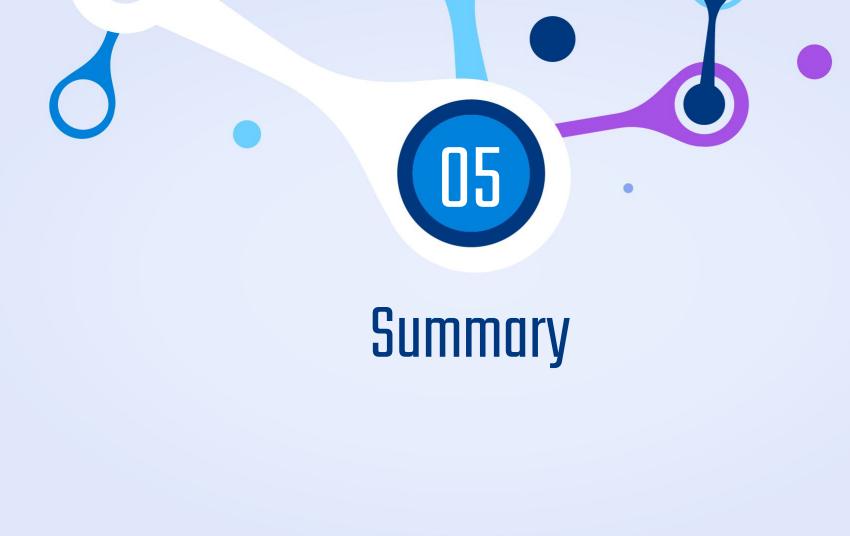
#### FNN vs LSTM Loss Plot



### **Validation**

Model	FNN	LSTM
Loss	1631.09	2299.44





#### Summary



FNN performs better than LSTM because it has lower MSE in training and less loss in validation



Use more data points to train the model - Currently, 500 data points were are to train the model. We tried to used 3000 data points but it took too long.

## QUESTIONS?



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