Selecting the appropriate hardware and software tools as applicable

Software Tools: Python libraries

* Numpy – for array operations
* Pandas – for file access
* Scikit Learn – scaling data
* Tensorflow - TensorFlow is a free and open-source software library for machine learning. It can be used across a range of tasks but has a particular focus on training and inference of deep neural networks
* Keras -  Keras acts as an interface for the TensorFlow library
* Matplotlib.pyplot – For data visualisation

Detailed block diagram with all specifications/algorithms

Data Scaling

* sklearn.preprocessing -> MinMaxScaler()

It has been used to scale the data from original value to a value ranging between 0 to 1.

* Train test split

67% split of data to training section and rest for testing.

* Time sequence formation

Explanation reqd. for this point, write in diary

Forming sequence data eg:- 1 to 100 days input -> 101 day output

2 to 101th days input -> 102 day output

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* Making deep learning model

Using LSTM layers

* Fitting data to the model

Using model.fit(trainX, trainY, validation=(testX, testy), epochs=100, batch\_size=64, verbose=1)

* Predicting the values

LSTM layers works on selectively remembering patterns for long durations of time.