



Stock Price Prediction is the task of forecasting future stock prices based on historical data and various market indicators. It involves using statistical models and machine learning algorithms to analyze financial data and make predictions about the future performance of a stock. The goal of stock price prediction is to help investors make informed investment decisions by providing a forecast of future stock prices.

Importance of Stock Market

- Stock markets help companies to raise capital.
- It helps generate personal wealth.
- Stock markets serve as an indicator of the state of the economy.
- It is a widely used source for people to invest money in companies with high growth potential.

Stock price prediction using LSTM

1. Imports:

```
import pandas as pd
```

```
import numpy as np
```

```
import matplotlib.pyplot as plt
```

```
%matplotlib inline
```

```
from matplotlib.pylab import rcParams
```

```
rcParams['figure.figsize']=20,10
```

```
from keras.models import Sequential
```

```
from keras.layers import LSTM,Dropout,Dense
```

```
from sklearn.preprocessing import MinMaxScaler
```



HOW DO STOCK EXCHANGES WORK?



Auction Markets

In auction markets, like the NYSE, buyers and sellers of a single security are matched before the trade is facilitated.

They are matched by pairing the highest bidding price with the lowest asking price.



Dealer Markets

In dealer markets, like the Nasdaq, dealers facilitate transactions using their own money, meaning a dealer might acquire a security before having a buyer. This increases the liquidity of the market.



Electronic Exchanges

The automated electronic communication networks (ECNs) enable the buy and sell orders for stocks and other securities to be made without dealers.



OTC Exchanges

Over-the-counter markets are where securities that aren't listed on major exchanges such as the NYSE or Nasdaq can be traded.