**Importing Libraries for Data preprocessing:**

from sklearn.preprocessing import MinMaxScaler

import wordcloud

import nltk

nltk.download('stopwords')

nltk.download('wordnet')

nltk.download('punkt')

nltk.download('averaged\_perceptron\_tagger')

import re

from nltk.stem.porter import PorterStemmer

from nltk.stem import WordNetLemmatizer

**Importing Libraries for Training and Testing Splitting:**

from sklearn.model\_selection import train\_test\_split

**Importing Libraries for ARIMA:**

import pandas as pd

import numpy as np

import warnings

import statsmodels.api as sm

import matplotlib.pyplot as plt

import itertools

from pandas.core import series

%matplotlib inline

from statsmodels.tsa.stattools import adfuller

from statsmodels.tsa.arima.model import ARIMA

import pmdarima as pm

from sklearn.metrics import mean\_absolute\_error

from  sklearn.metrics  import  mean\_absolute\_percentage\_error

from sklearn.metrics import mean\_squared\_error

**Importing Libraries for SVR:**

import pandas as pd

import numpy as np

from sklearn.model\_selection import train\_test\_split

from sklearn.svm import SVR

from sklearn.metrics import mean\_absolute\_error

from sklearn.metrics import mean\_squared\_error

from sklearn.metrics import mean\_absolute\_percentage\_error

from sklearn.metrics import r2\_score

from matplotlib import pyplot as plt

**Importing Libraries for LSTM & GRU Single and multi Feature:**

import pandas as pd

import numpy as np

from keras.models import Sequential

from keras.layers import LSTM

from keras.layers import GRU

from keras.layers import Dropout

from keras.layers import Dense

from sklearn.metrics import mean\_absolute\_error

from sklearn.metrics import mean\_absolute\_percentage\_error

from sklearn.metrics import mean\_squared\_error

from keras.models import Sequential

from keras.models import load\_model

**Importing Libraries for Twitter Sentiment Analysis:**

!pip install -q wordcloud

!pip install gensim

!pip install vaderSentiment

!pip install tpot

import warnings

warnings.filterwarnings('ignore')

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import seaborn as sns

from vaderSentiment.vaderSentiment import SentimentIntensityAnalyzer

from sklearn.discriminant\_analysis import LinearDiscriminantAnalysis

from sklearn.metrics import classification\_report, confusion\_matrix

from nltk.stem.porter import PorterStemmer

from nltk.stem import WordNetLemmatizer

from textblob import TextBlob

from keras.models import Sequential

from keras.layers import GRU

from keras.layers import Dropout

from keras.layers import Dense

from tpot import TPOTClassifier

from sklearn.metrics import confusion\_matrix,accuracy\_score,roc\_auc\_score

from sklearn.tree import DecisionTreeClassifier

from sklearn.preprocessing import StandardScaler

from sklearn.decomposition import PCA

from sklearn.pipeline import Pipeline

from sklearn.linear\_model import LogisticRegression

from sklearn.ensemble import RandomForestClassifier

**Resources:**

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2. Article on A Deep Learning-Based Cryptocurrency Price Prediction Model That Uses On-Chain Data.
3. Hamayel, Mohammad J., and Amani Yousef Owda. "A novel cryptocurrency price prediction model using GRU, LSTM and bi-LSTM machine learning algorithms." AI 2.4 (2021): 477-496.
4. Article On Forecasting Cryptocurrency Prices: A Comparison of Machine Learning, Deep Learning, and Ensembles for Kate Murray , Andrea Rossi , Diego Carraro and Andrea Visentin 2023,5,196-209.
5. FORECASTING CRYPTOCURRENCY PRICES USING DEEP LEARNING: INTEGRATING FINANCIAL, BLOCKCHAIN, AND TEXT DATA by Vincent Gurgul, Stefan Lessmann and Wolfgang Karl Härdle.
6. CRYPTOCURRENCY PRICE PREDICTION USING LSTM Mrs. S. Mounika, B. Aravind, K. Sai Charan and B. Kiran e-ISSN: 2582- 5208.
7. DESIGN AND IMPLEMENTATION OF CRYPTOCURRENCY PREDICTION MODEL USING GRU ALGORITHM by Dr.M. Tanooj Kumar, Y. Om Sai , K.Geetardha, P.Naga Sandhya and E.Madhan Mohan Reddy ISSN: 2278-4632 Vol-12 Issue-01 No.01: 2022.
8. Flask Web Development(Book) by Miguel Grinberg.
9. Beginning Node.js (Book)by Basarat Ali Syed.