**Time\_Series\_Analysis**

**Data**: <https://www.kaggle.com/bryanb/cac40-stocks-dataset>

**“This dataset is scrapped from a** [**finance website**](https://markets.businessinsider.com/index/components/cac_40)**. It contains all daily CAC40 Stocks from 2010 to 2020.CAC40** [**documentation**](https://www.investopedia.com/terms/c/cac40.asp)**”**

**Tasks**:

* Practise EDA applied to time series
* Make use of statistical tests to check stationarity (Dickey-Fuller test…)
* Get more familiar with Akaike information criterion, estimator of out-of-sample prediction error
* Learn how to tune autoARIMA models
* Setup a forecasting strategy on stocks
* Segmentation
* Identify stress periods specific to an industry

**Aim**: **Stock Market Prediction**

**Features**:'Name','Date','Open','Closing\_Price','Daily\_High','Daily\_Low','Volume

**Target**: ‘Closing Price’, ‘Daily High’, ‘Daily Low’

**Objective**

ARIMA :<https://www.kaggle.com/bryanb/introduction-to-time-series-analysis>

LSTM : <https://www.kaggle.com/mtszkw/using-xgboost-for-stock-trend-prices-prediction>

Deep Reinforcement: <https://www.kaggle.com/itoeiji/deep-reinforcement-learning-on-stock-data>

Step 1:

[**1. Line plot of observations**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap1)

[**2. Treatment of missing values**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap2)

[**3. Seasonality**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap3)

[**4. Time series components**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap4)

[**5. Stationarity**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap5)

[**6. Autocorrelation**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap6)

[**7. Lag Scatter Plot**](https://www.kaggle.com/bryanb/introduction-to-time-series-analysis#chap7)

#########DeadLine : Monday