



# Indian Stock Market Data Providers

For Algorithmic Trading

# Coding, API and DATA

- Python 3.x is the language used to Code an algorithm.
- To write the Code in python, IDE's can be used. Eg. PyCharm, Spyder or Jupiter Notebook
- Data is needed to write the strategy or an algorithm.
- Data is historical or real time.
- Various free as well as paid datasources are available.
- To get Data from those datasources we need to use their API.
- Every datasource can be compared on the basis of type of data we get from it, ease of use, paid or free and accuracy of data.

# Data Scraping

- **Data scraping**, also known as **web scraping**, is the process of importing information from a website into a spreadsheet or local file saved on your computer. It's one of the most efficient ways to get **data** from the **web**, and in some cases to channel that **data** to another website.
- **To extract data using web scraping with python, you need to follow these basic steps:**
  - Find the URL that you want to scrape.
  - Inspecting the Page.
  - Find the data you want to extract.
  - Write the code.
  - Run the code and extract the data.
  - Store the data in the required format.

# Yahoo Finance API

- The API that Yahoo provides to fetch financial information.
- Yahoo deprecated their Finance API in 2017.
- **rapidAPI** is an API provider that gives data scraped from Yahoo. It is a paid service.
- the python library [yfinance](#) provides data by scraping the data from Yahoo.
- It provides more than five years of daily OHLC price data, minutes OHLC data, finance summaries (earnings, balance sheet), stock actions (including splits and dividends).
- **Limitations** - Using the Public API (without authentication), you are limited to 2,000 requests per hour per IP (or up to a total of 48,000 requests a day).



**DIME**

- **Google Finance API** is no longer supported by Google so it's undocumented and unreliable.
- **Currencylayer API** Real-time Paid JSON API for 168 World Currencies, collected from various commercial sources & banks and compatible with any application & programming language.
- **ALPHA VANTAGE** is a paid service that provides Stock market APIs in JSON and Excel, FX and cryptocurrency data feeds, 50+ technical indicators with Global coverage.
- **Currency API** is a simple, reliable and real-time currency exchange API for current and historical forex rates. It is a paid service.
- **IEX Cloud, World trading data, intrinio, Quandl** different API providers will have different price systems. Some are free and others are subscription-based or one-time-purchase based.
- **NSEpy** is a library to extract historical data from NSE's website. This library would serve as a basic building block for automatic/semi-automatic algorithm trading systems or backtesting systems for Indian markets.
- **Zerodha & Upstox** API providers where clients can gain programmatic access to data such as profile and funds information, order history, positions, live quotes etc. These services are charged.