Codebook for Attrition Dataset

# Data Overview

## Credentials

The direct link to data is:

1. S&P 500 data – <https://finance.yahoo.com/quote/SPY?p=SPY>

2. TVIX data - <https://finance.yahoo.com/quote/TVIX?p=TVIX>

3. Bitcoin data - <https://www.kaggle.com/johnnyjai/bitcoin/data>

## Business goal

This data was collected to answer the following questions:

1. Predict the price of TVIX.

2. Predict the price of Bitcoin.

3. Which predict is more accurate

4. What is the percentage of return in a trading strategy of the S&P 500 index. The trading strategy is to choose 15 best stocks to forecast each day.

## Data description

This data set is a data frame of 10 variables over ~1800 rows. Each row represents an trading date that traded VIX, S&P 500 and Bitcoin.

We add the S&P 500 close price variable to the data frame of the TVIX for add more variable that influence the price of the TVIX and suppose to Increase the accuracy of the prediction.

# Variables description

|  |  |  |  |
| --- | --- | --- | --- |
| Variable Name | Description | Type | Possible values |
| Date | Trading Date (format- dd/mm/YY) | Date | 25/11/2015 |
| Open | The open price at this trading date | Numeric | Positive, USD |
| High | The highest price reached in this trading date | Numeric | Positive, USD |
| Low | The lowest price reached in this trading date | Numeric | Positive, USD |
| Close | The close price at this trading date | Numeric | Positive, USD |
| Volume | The number of total shares that are traded on a given day | Numeric | Positive, USD |
| Change | The percent number of change in the price relative to the previous day price | Numeric | Positive/ Negative percent |
| Market Cup | Total equity market value | Numeric | Positive, USD |
| RSI | The relative strength index (RSI) is a momentum indicator that compares the magnitude of recent gains and losses over a specified trading date to measure speed and change of price movements of a security | Numeric | Positive/ Negative percent |
| EMA | Indicator in [technical analysis](https://www.investopedia.com/terms/t/technicalanalysis.asp) that helps smooth out [price action](https://www.investopedia.com/terms/p/price-action.asp) by filtering out the “noise” from random price fluctuations. The two basic and commonly used MAs are the [simple moving average (SMA),](https://www.investopedia.com/terms/s/sma.asp) which is the simple average of a security over a defined number of time periods, and the [exponential moving average (EMA),](https://www.investopedia.com/terms/e/ema.asp) which gives bigger weight to more recent prices | Numeric | Positive, USD |
| S&P 500 close | The close price of S&P 500 index at this trading date | Numeric | Positive, USD |



