

1-Momentum Indicator- MACD

To calculate MACD, I first need to find the Exponential Moving Average(EMA) so that I can calculate the MACD line and signal line. This is preferred over the Simple Moving Average so that recent activities will get more importance. I chose 12 and 26 day periods to calculate the MACD line and 9 day period to calculate the signal line, as they are the standard and widely accepted periods to calculate the lines.

2-Volume Indicator-Volume RSI

To calculate Volume RSI, I used a 14 day lookback period. I set the span to $2*n-1$ to adjust the weightage.(span = $2*n-1$ aligns the weighted mean definition of pandas library and the definition of RSI)

3-Volatility Indicator-Average True Range

Here also we use a 14 day lookback period along with span of $2*n-1$ or $2*14-1=27$ days