**Required skills**

Experience in python programing in stock trading

**References**

**MUST** read about Tradingview.com

**MUST** read about Alpaca.market, API Trading

**MUST** read about https://handsoffinvesting.com/calculate-and-analyze-rsi-using-python/

**Scope**

To develop a program preferably in python, to trade stocks based on its Relative Strength Index (RSI).

**What is RSI**

The Relative Strength Index (**RSI**), is a momentum oscillator that measures the speed and change of price movements. The **RSI** oscillates between zero and 100. Traditionally the **RSI** is considered overbought when above 70 and oversold when below 30.

**High level summary**

**RSI** is a momentum oscillator commonly used to predict when a stock is oversold or overbought. This indicator is not always accurately predict stop price, or not all stocks are accurately predictable by **RSI**.

**Goals and Deliverables:**

1. Goal 1, is to screen stocks to identify which stocks can be predictable with >50% accuracy using **RSI** as indicator. This goal is actual replication of a work presented in <https://handsoffinvesting.com/calculate-and-analyze-rsi-using-python/>. The top 20 hits will be called RSIDS-20 (RSI dependent stocks 20).
2. Goal 2, is to develop a program to trade **RSDIS** utilizing a strategy illustrated in the figure 1 and to back test the developed program on **RSIDS-20** to identify RSIDS-5 tradable stocks.
3. Goal 3 is to set up the program to run the program and execute RSIDS-5 trades in Alpaca trading platform.

Figure 1: Illustration of RSI trading execution based on RSI strategy. The RSIDS are bought at several stages when RSI is decreasing towards 0. The RSIDS are sold at several stages when RSI is increasing towards 100.

