Citi Technology Academy – Graduate Project

Explanation of Trading Strategies

Two Moving Averages

This trading strategy seeks to take advantage of short-term trends in a stock's price. Gather a "long average" of the market price (either the price as reported by Yahoo!, or the average of bid and ask if price is not available) – that is, a moving average over some defined period, say 4 hours. Also compute a "short average" over a period of more like 30 minutes. Continually updating these averages will allow you to observe trends in the averages themselves.

The trigger for this strategy is when the short average "crosses" the long average: that is, when it was below the long average a moment ago, and now it is above the long average, or vice-versa. When the short average crosses above the long, it's time to buy; if it crosses below, it's time to sell. Place your trade and record it.

The exit condition for this strategy is a simple profit or loss percentage – as in, once I've taken a long or short position, I'll close it (sell what I bought or buy back what I sold) at a profit or loss of one percent.

Bollinger Bands

This strategy seeks to take advantage of volatility in a stock, expecting it to return to its established pattern. Take a moving average over some period (for example 20 days), and calculate the standard deviation for that period. If the price then hits some multiple of the standard deviation (2 std. devs. for example, 1.75, 2.2, etc.) on the low side, take it for undervalued, and go long; if it hits the that standard deviation multiple on the high side, short it. Again, exit a position at a percentage-based profit or loss threshold.

Price Breakout

This strategy is designed to take advantage of upcoming volatility. First, find the "candlesticks" of a stock – open/close, high/low – over a series of fixed periods (for example every 30 minutes). Watch for the high/low range to fit inside the <u>previous</u> period's open/close. If this occurs, and occurs repeatedly, the price range of the stock is narrowing, and could be about to "break out." After such a trend is identified, wait for the breakout in the form of either high or low leaving the open/close range – it doesn't really matter which. This is your trigger: take a long position if the latest close is higher than the open, short if lower. Again, exit at a certain profit or loss from your initial trading price.