Abstract

In 2023 about 61% of adults in the United States invested money in the stock market. The goal of stock market trading, done by both large institutions and individuals, is of course to make a profit. However, many day traders and individual investors fail when it comes to making a good return. Many trades are influenced by psychology and emotion rather than data, which can be analyzed to determine the best stocks to buy at any given time. Algorithmic trading can be used to solve some of these obstacles for individual investors. Algorithmic trading involves setting up rules that cause trades to be automatically executed when specific criteria are met. Some trading strategies can be profitable and many depend on timing and historical data. In this thesis the goal is to predict the best trading strategies for stocks over a given period of time. Furthermore the goal is to predict the best trading strategy to buy and sell a stock during each hour of the trading day. It was possible to predict whether or not trading strategies would be profitable at each hour of the trading day with 69.93% accuracy, beating a baseline value of 50%. It was possible to predict the best strategy overall per hour of the trading day with 29.54% accuracy, beating a baseline value of 11.11%.