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DS 4002

### **Using Data Science to Invest**

Investing young is important, and learning how to trade and buy stocks is often a daunting task for young investors. People around the college age may find themselves lost when researching securities to purchase. This is where data science comes in. More and more brokerages are hiring data scientists to leverage their knowledge of working applications and models to help predict stock prices and find promising securities to purchase.

### **The Deliverable:**

You are in the process of getting hired for a brokerage. As part of the process, the brokerage assigns you data on 10 stocks; it is up to you to choose the best one. You will use time series data to predict the stocks. The data spans over a 3-month period with dates from each day of the stock market closing. First, you will engage in exploratory data analysis (EDA) to help explain the stock's performance over the 3-month period surveyed. The brokerage wants to see which is the best-performing stock from these three months, and EDA is the method for which you can capture that insight. Then you will utilize a predictive model to determine which is the best security to buy going forward. You can use any model to predict the stocks, although a Random Forest regression model is recommended. Explain a level of significance for each of the variables, and briefly describe why that variable is especially crucial for finding securities to purchase. Insights should be detailed through visuals or supplemental tables.

**Github Link:** <https://github.com/jacksonshaiz/CS2-DS4001/tree/main>