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Project Proposal

## Reveal and visualize the Important Factors that affect Stock Trend

**Introduction**

By the end of 2019, there were more than 625,000 users who have been registered a stock account in the U.S stock market and began to trade in stock. The stock market is a place where full of opportunities and risks. Some people are rapidly growing their wealth by trading stocks, others have lost a lot of money in the stock market. The success of Warren Buffett proved that the stock market gives an intuitive feedback on one's vision and knowledge of stocks. In other word, how to gain profits from stock trading can be studied and analyzed.

**Objectives**

The primary objective of this project to visualize the financial data that extracted from big tech-companies’ finance reports which are listed on the U.S. stock exchange from 2010 to 2019. Because of a company's financial information can most directly reflect the operation of a company, these data are also tightly bound with their stock price. It would be very useful to build a machine learning data model that reveal the effects to their stock price of each financial factor and the hidden coefficient. Finally, visualize these coefficients and use the data model to predict these companies’ future stock price. The financial data from this project will come from Yahoo finance website.

**Proposed System and Platform**

The project will be presented in the form of an HTML webpage with CSS and python Flask as backend. The visualization for this project will be created with D3.js visualization library and Google Visualization API.