STOCK ANALYSIS PLATFORM

Summary

Stock market is the place of stock issuance and circulation. The change of the stock market is closely related to the development of the whole market economy. The stock market that we seen often is the second-level circulation market -- buying and selling. People's desire to buy stocks makes the stock market more active and dynamic, stock price changes directly affect market expectations, from a technical analysis point of view, as long as historical information is sufficient, and doing data mining among all the information, then stock prices could be predicted.

Based on the above assumptions, we will design a distributed computing system with powerful performance and use a real-time large data analytic architecture to implement streaming processing and synchronization calculation, combined with the existing forecasting model to complete the data analysis of stock and forecasting task.

Objective and Approach

At the highest level, the stock prediction and machine learning architecture, supports an optimization process that is driven by predictive models, and there are three basic components. First, incoming data flow, real-time trading data must be captured and stored, becoming historical data. Second, the system must be able to learn from historical trends in the data and recognize patterns and probabilities to inform decisions. Third, the system needs to do a real-time comparison of new, incoming trading data with the learned patterns and probabilities based on historical data. Then, it predicts an outcome and determines an action to take.

Planning to use**：**Docker/AWS + Kafka + Spark + Javascript/Python