Stock data (open high…)

Yearly

Monthly for last 5 years

Weekly for last year

Daily for last 6 months

DATA for only today’s data

News

Forecast api (stock. direction, percentage change)

DONE Hardcode recommended questions and answers

EXAMPLE:

SYSTEM\_PROMPT = "You are a seasoned stock market analyst. Your task is to list the positive developments and potential concerns for companies based on relevant news and basic financials from the past weeks, then provide an analysis and prediction for the companies' stock price movement for the upcoming week. Your answer format should be as follows:\n\n[Positive Developments]:\n1. ...\n\n[Potential Concerns]:\n1. ...\n\n[Prediction & Analysis]:\n...\n"

YOUR\_PROMPT = """

[Company Introduction]:

Apple is a leading entity in the Tech Industry sector. Incorporated and publicly traded since 1980, the company has established its reputation as one of the key players in the market. As of today, Apple has a market capitalization of 2.55T in dollars, with 15,509,763,000 shares outstanding. Apple operates primarily in the US, trading under the ticker AAPL on the NASDAQ Exchange. As a dominant force in the Tech Industry space, the company continues to innovate and drive progress within the industry.

From 2024/03/19 to 2024/04/19, Apple's stock price decreased from 162 to 154. Company News during this period are listed below:

[Headline]: Apple cuts greenhouse gas emissions in half

[Summary]: Innovations in clean energy, materials, and recycling are driving progress toward Apple’s ambitious environmental goals. Apple has reduced its overall greenhouse gas emissions by more than 55 percent since 2015, the company shared today in its 2024 Environmental Progress Report. The milestone marks important progress on the journey toward Apple 2030, the company’s ambitious goal to become carbon neutral across its entire value chain by the end of this decade. The goal centers on cutting emissions by 75 percent from 2015 levels.

[Headline]: Apple Vision Pro brings a new era of spatial computing to business

[Summary]: Incredible new enterprise experiences leverage spatial computing to customize workspaces, collaborate on 3D designs, deliver specialized employee training, and guide remote fieldwork in entirely new ways

Some recent basic financials of Apple, reported at 2023/12/31, are presented below:

[Basic Financials]:

EPS TTM: $6.427

P/E ratio: 26.87

dividend yield: 0.56%

Based on all the information before 2024/04/20, let's first analyze the positive developments and potential concerns for AAPL. Come up with 2-4 most important factors respectively and keep them concise. Most factors should be inferred from company-related news. Then make your prediction of the AAPL stock price movement for next week (from 2024/04/20 to 2024/04/29). Provide a summary analysis to support your prediction."""

PREDICTION:

answer = """

[Input]: [Positive Developments]:

1. Apple has successfully cut its greenhouse gas emissions by 55% since 2015, indicating a strong commitment to sustainability and environmental responsibility.

2. The company's new product, Vision Pro, has the potential to revolutionize the business world by providing an innovative and immersive enterprise experience.

3. Apple's Environmental Progress Report has highlighted the company's achievements and commitment to becoming carbon neutral.

[Potential Concerns]:

1. Apple's stock price has been steadily decreasing over the past few weeks, indicating potential market instability.

2. The company's P/E ratio is relatively high, which could indicate that investors are becoming more cautious about investing in the stock.

3. The dividend yield is relatively low, which could indicate that the company's financial performance may not be as strong as expected.

[Prediction & Analysis]:

Based on the above analysis, I predict that Apple's stock price will decrease by around 2-3% in the upcoming week. While the company has shown strong commitment to sustainability and innovation, there are some potential concerns that may impact the stock price in the short term. The recent decrease in stock price and high P/E ratio are significant concerns, as they could indicate potential market instability and caution among investors. However, the company's commitment to sustainability and innovation could potentially drive long-term growth and stability. Therefore, while the short-term outlook may be somewhat negative, the long-term outlook for Apple remains positive

"""

FEATURE EXTRACTION:

DOWN - 2%

QUESTIONS:

1. What is the implication of a high P/E ratio in the stock market, and how can it be used to gauge investor sentiment?

2. How do dividend yields and P/E ratios typically interact, and what can their relationship indicate about a company's financial performance?

3. What is the significance of a decreasing stock price trend, and how can it be used to identify potential market instability or investor sentiment shifts?

4. How can one evaluate the long-term outlook for a certain stock?

ANSWERS:

1. The implication of a high P/E ratio in the stock market is that investors are willing to pay a premium for a company's shares, indicating high expectations for future growth and profitability. A high P/E ratio can be used to gauge investor sentiment in several ways:

\* It reflects the market's optimism about a company's prospects, as investors are willing to pay a higher multiple of earnings for a company with high growth potential.

\* It can be used to identify overvalued or undervalued stocks, as a high P/E ratio may indicate that a stock is overbought and due for a correction.

\* It can be used to compare the market's expectations for a company to its actual performance, as a high P/E ratio may indicate that a company's earnings are not meeting market expectations.

According to the dividend discount model (DDM), a high P/E ratio can also be interpreted as a reflection of investors' expectations for future dividend payments. If investors expect a company to generate high returns in the future, they may be willing to pay a higher P/E ratio, as they anticipate higher dividends in the future.

Source: Fama, E. F., & French, K. R. (2002). The equity premium puzzle. Journal of Financial Economics, 63(3), 301-326.

2. Dividend yields and P/E ratios typically interact in the following ways:

\* High dividend yields are often accompanied by low P/E ratios, as investors may be attracted to the income generated by the dividend payments, but may not expect significant future growth.

\* Low dividend yields are often accompanied by high P/E ratios, as investors may be willing to pay a premium for a company's shares, anticipating high future growth and profitability.

\* A company with a high P/E ratio and low dividend yield may indicate that investors are more focused on growth prospects than current income generation.

The relationship between dividend yields and P/E ratios can indicate several things about a company's financial performance:

\* High dividend yields and low P/E ratios may indicate that a company is a value stock, with a strong history of dividend payments and a low valuation.

\* Low dividend yields and high P/E ratios may indicate that a company is a growth stock, with high expectations for future growth and profitability.

Source: Damodaran, A. (2012). Investment Valuation. John Wiley & Sons.

3. A decreasing stock price trend can be used to identify potential market instability or investor sentiment shifts in several ways:

\* A decreasing stock price trend may indicate that investors are becoming less confident in a company's prospects, as they adjust their expectations for future growth and profitability.

\* A decreasing stock price trend may also indicate that investors are becoming more risk-averse, as they seek safer investments with lower volatility.

\* A decreasing stock price trend can also be a sign of a broader market shift, as investors adjust their portfolios in response to changes in interest rates, economic indicators, or other market factors.

Investors can use a decreasing stock price trend to identify potential market instability or sentiment shifts by:

\* Monitoring changes in investor sentiment and market conditions, such as changes in market volatility or investor confidence.

\* Analysing company-specific factors, such as changes in earnings expectations, dividend payments, or management changes.

\* Considering broader market trends, such as changes in interest rates, economic indicators, or other market factors.

Source: Shiller, R. J. (2014). Irrational Exuberance. Princeton University Press.

4. Evaluating the long-term outlook for a certain stock is a crucial task for investors seeking to make informed decisions. To accomplish this, I employ a multi-faceted approach that incorporates both quantitative and qualitative analysis.

Firstly, I examine the company's financial statements, focusing on key metrics such as revenue growth, profitability, and cash flow. This provides insight into the company's underlying business fundamentals and its ability to generate returns for shareholders. For instance, a company with a consistent track record of revenue growth and increasing profitability is more likely to maintain its competitive edge and drive long-term value creation.

Secondly, I analyze the company's industry and competitive landscape. This involves understanding the company's position within its industry, its market share, and the competitive dynamics that shape its business. For example, a company operating in a rapidly growing industry with limited competition may have a more favorable long-term outlook.

Thirdly, I consider the company's management team and their track record of delivering value to shareholders. A strong management team with a history of making sound strategic decisions and executing effectively is more likely to drive long-term growth and profitability.

Finally, I incorporate macroeconomic indicators, such as GDP growth, interest rates, and inflation, into my analysis. These factors can significantly impact the company's performance and long-term outlook.

By combining these factors, I can gain a comprehensive understanding of the company's long-term outlook and make informed investment decisions. For instance, a company with a strong financial foundation, a growing industry, a skilled management team, and a favorable macroeconomic environment is more likely to maintain its competitiveness and drive long-term value creation.

In conclusion, evaluating the long-term outlook for a certain stock requires a thorough examination of the company's financials, industry, management, and macroeconomic environment. By incorporating these factors into my analysis, I can make informed investment decisions and maximize returns for my clients.