

Financial News Impact Plugin (FNIP) Evaluation

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The Financial News Impact Plugin (FNIP) operates as a Chrome browser extension and supports two LLM models: HuggingFace or GPT. It provides real-time sentiment analysis of the article being viewed, offering valuable insights to assist users in making better-informed investment decisions. The effectiveness of FNIP will be assessed by testing it on historical financial online articles and their associated market reactions. Since FNIP supports two LLM models, we will test each model on the same article, then review the corresponding market reaction.

The sentiment analysis results from both models convey the same message, which is reflected in the winning classification. The HuggingFace sentiment analysis provides three possible classifications—positive, negative, and neutral—along with their corresponding probability scores, ranging from zero to one. In contrast, the GPT analysis offers only the winning classification along with its probability score, also between zero and one. Unlike HuggingFace, GPT also estimates the time frame in which the stock may be impacted based on the information in the article and explains the reasoning behind its evaluation.




This evaluation will analyze the sentiment of three articles, each published within the last six months. The articles, sourced from different online platforms, focus on three distinct companies: Delta Airlines, Boeing, and Apple.

Delta Airlines

Josephs, L, & Yildirim, E. (2024, July 31). *Delta CEO says CrowdStrike-Microsoft outage cost the airline \$500 million*. CNBC. <https://www.cnbc.com/2024/07/31/delta-ceo-crowdstrike-microsoft-outage-cost-the-airline-500-million.html?&qsearchterm=delta%20airlines%20crowdstrike>

Analyzed Result using HuggingFace: 97% Negative

Analyze Report



Company: DAL (Delta Air Lines, Inc.)

Article link: www.cnbc.com

Analyze date: 12/9/2024, 10:57:39 PM




negative: 0.9700642228126526
neutral: 0.029077205806970596
positive: 0.0008586455369368196

Article:

Delta CEO Ed Bastian said the massive IT outage earlier this month that stranded thousands of customers will cost it \$500 million. The airline canceled more than 5,000 flights in the wake of the outage, which was caused by a botched CrowdStrike software update and took thousands of Microsoft systems around the world offline. Bastian said the carrier would seek damages from the disruptions, adding, "We have no choice."

Analyzed Result using GPT: 85% Negative

Analyze Report



Company: DAL (Delta Air Lines, Inc.)

Article link: www.cnbc.com

Analyze date: 12/9/2024, 11:03:26 PM

negative: 0.85 - Impact time: 7 day(s)

Reason: The significant financial loss due to the IT outage and flight cancellations indicates serious operational issues, leading to a negative sentiment regarding Delta Air Lines' performance and prospects.

Article:

Delta CEO Ed Bastian said the massive IT outage earlier this month that stranded thousands of customers will cost it \$500 million. The airline canceled more than 5,000 flights in the wake of the outage, which was caused by a botched CrowdStrike software update and took thousands of Microsoft systems around the world offline. Bastian said the carrier would seek damages from the disruptions, adding, "We have no choice."

Market Reaction, July 31, 2024: Downtrend; Falling over a period of approximately 7 days, as estimated by GPT






Boeing

Reuters. (2024, November 21). *Boeing secures \$2.38 billion contract for 15 additional U.S. Air Force KC-46A tankers*. <https://www.reuters.com/business/aerospace-defense/boeing-secures-238-billion-contract-15-additional-us-air-force-kc-46a-tankers-2024-11-21/>

Analyzed Result using HuggingFace: 99.96% Positive

Analyze Report



Company: BA (The Boeing Company)

Article link: www.reuters.com

Analyze date: 12/9/2024, 11:51:18 PM

positive: 0.9996145963668823
negative: 0.00025648108567111194
neutral: 0.0001289260690100491

Article:

Boeing (BA.N), opens new tab said on Thursday it has secured a \$2.38 billion contract from the U.S. Air Force to build 15 additional KC-46A Pegasus aerial refueling tankers under the Lot 11 procurement.
Boeing now has 168 KC-46A tankers on contract globally.
Since 2019, Boeing has delivered 89 KC-46As to the U.S. Air Force and four to the Japan Air Self-Defense Force.
In October, the KC-46A Pegasus was deployed for its first full-scale mission after being approved for global combat operations in 2022.

Analyzed Result using GPT: 87% Positive

Analyze Report



Company: BA (The Boeing Company)

Article link: www.reuters.com

Analyze date: 12/9/2024, 11:48:11 PM

positive: 0.87 Impact time: 7 day(s)

Reason: The acquisition of a significant contract from the U.S. Air Force reflects strong business performance and demand for Boeing's products, likely boosting investor confidence and stock value.

Article:

Boeing (BA.N), opens new tab said on Thursday it has secured a \$2.38 billion contract from the U.S. Air Force to build 15 additional KC-46A Pegasus aerial refueling tankers under the Lot 11 procurement.
Boeing now has 168 KC-46A tankers on contract globally.
Since 2019, Boeing has delivered 89 KC-46As to the U.S. Air Force and four to the Japan Air Self-Defense Force.
In October, the KC-46A Pegasus was deployed for its first full-scale mission after being approved for global combat operations in 2022.

Market Reaction, November 21, 2024: Uptrend; Rising over a period of approximately 7 days, as projected by GPT






Apple

Zeffer, M. (2024, November 21). *Apple is reportedly building a more conversational Siri powered by LLMs*. Yahoo Finance. <https://finance.yahoo.com/news/apple-reportedly-building-more-conversational-222049646.html>

Analyzed Result using HuggingFace: 99.85% Neutral

Analyze Report



Company: AAPL (Apple Inc.)

Article link: finance.yahoo.com

Analyze date: 12/10/2024, 12:25:18 AM

neutral: 0.9985690116882324
positive: 0.0013455667067319155
negative: 0.00008537083340343088

Article:

Apple is developing a new version of its voice assistant, Siri, powered by advanced large language models (LLMs), according to sources cited by Bloomberg. This more conversational Siri is part of Apple's attempt to catch up in AI, where competitors have released impressive features, like Google's Gemini Live, that are far more natural to talk to than Siri.

The new assistant reportedly will fully replace the Siri interface that users rely on today, and Apple is planning to release the feature in the spring of 2026. The feature seems like it will be similar to OpenAI's Advanced Voice Mode but with all the same access to personal information and apps that Siri has today.

Until then, Apple is relying on third parties to power the iPhone's advanced AI features. OpenAI's ChatGPT will become available inside Apple Intelligence in December, and Apple has reportedly discussed similar deals with other AI providers, such as Google and Anthropic.

Analyzed Result using GPT: 40% Neutral

Analyze Report



Company: AAPL (Apple Inc.)

Article link: finance.yahoo.com

Analyze date: 12/10/2024, 12:29:19 AM

neutral: 0.4 Impact time: 180 day(s)

Reason: The article discusses Apple's efforts to enhance Siri with advanced AI capabilities, which shows initiative but also indicates a lag behind competitors. The long timeline for release suggests limited immediate impact.

Article:

Apple is developing a new version of its voice assistant, Siri, powered by advanced large language models (LLMs), according to sources cited by Bloomberg. This more conversational Siri is part of Apple's attempt to catch up in AI, where competitors have released impressive features, like Google's Gemini Live, that are far more natural to talk to than Siri.

The new assistant reportedly will fully replace the Siri interface that users rely on today, and Apple is planning to release the feature in the spring of 2026. The feature seems like it will be similar to OpenAI's Advanced Voice Mode but with all the same access to personal information and apps that Siri has today.

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Market Reaction, November 21, 2024: Uptrend; Steady rise over a period of 3 weeks and estimated to continue uptrend for approximately 180 days, as forecasted by GPT.



In conclusion, despite differences in how the analysis is calculated and presented, both models produced identical outcomes. For each article, the market reaction aligned with the sentiment analysis findings. Therefore, regardless of which LLM a user chooses, FNIP may serve as a valuable tool to help users make more informed investment decisions.