### An 'Intelligent'

## Stock Market



Team 7
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#### What is The

## Objective



### One economic message from the Costco gold bar craze

Gold prices continue to hit fresh records. Here's one possible message from the safe-haven move.

Yahoo Finance - 4 hours ago COST -0.31% GLD -0.02%



Dow slides, Nvidia and Apple jump to records

Yahoo Finance - 6 hours ago



Goldman: The S&P 500's decade of big gains is over

Bloomberg - 15 hours ago (\*GSPC -0.18%)



Musk's million-dollar promises and Harris's record haul heat up '24 race

Yahoo Finance - 8 hours ago TSLA -0.84%

Report: Trump's policies would Jeopardize Social Security

Yahoo Finance - 6 hours ago

Nvidia surges to another record as Wall Street stays bullish

Yahoo Finance - 4 hours ago MU -1,86% TSM +0,58%

CEO: Nike shoots for turnaround with 12-year NBA, WNBA deal

Yahoo Finance - 3 hours ago

NKE -1.74% UA -2.78%

Treasury 10-year yields may hit 5% within months: T. Rowe Price

Bloomberg - 18 hours ago

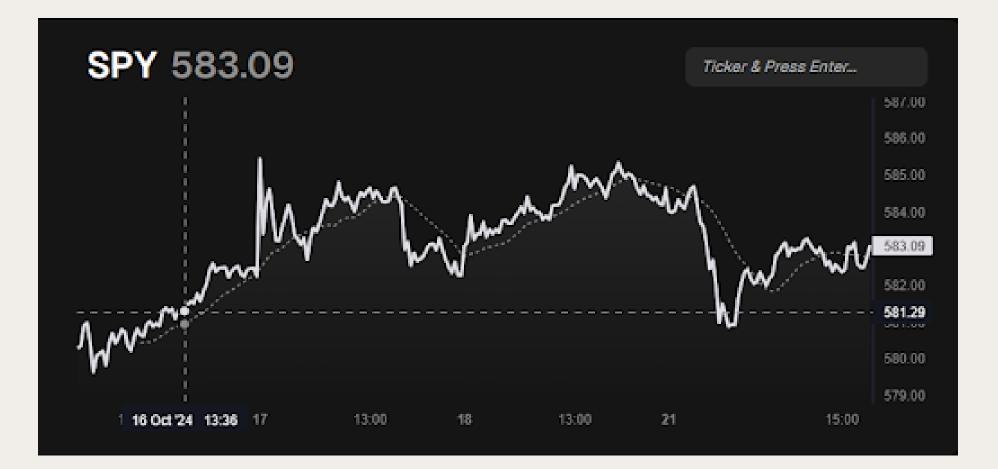
Fed officials call for 'gradual' and 'modest' rate cuts

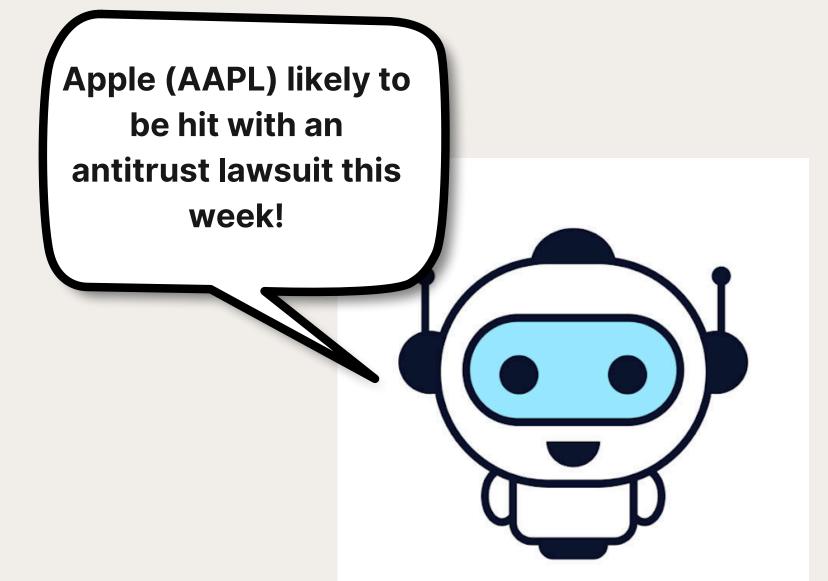
Yahoo Finance - 5 hours ago

Here's why investors are expecting more upbeat results from GM

Yahoo Finance - 9 hours ago

GM -0.51% F -1.98%

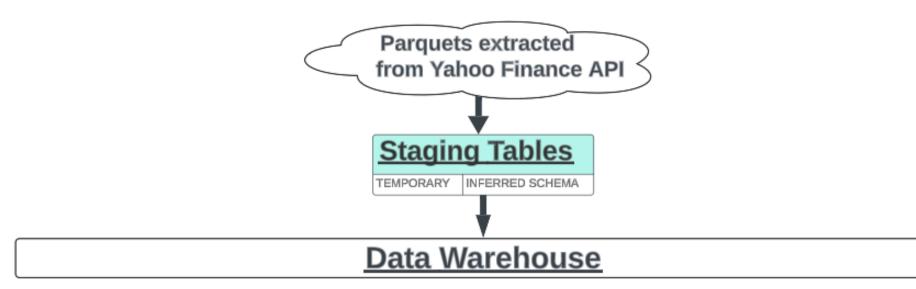


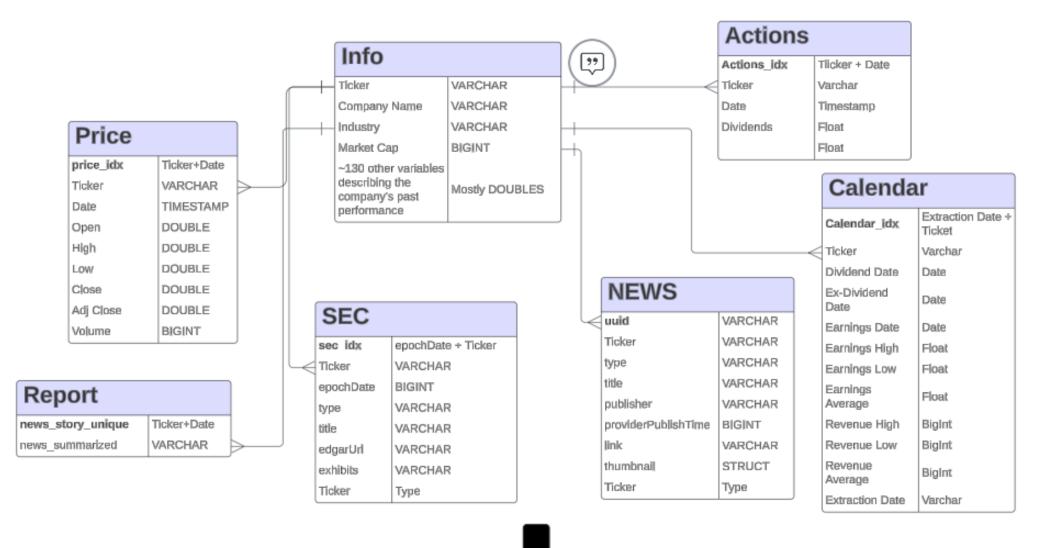


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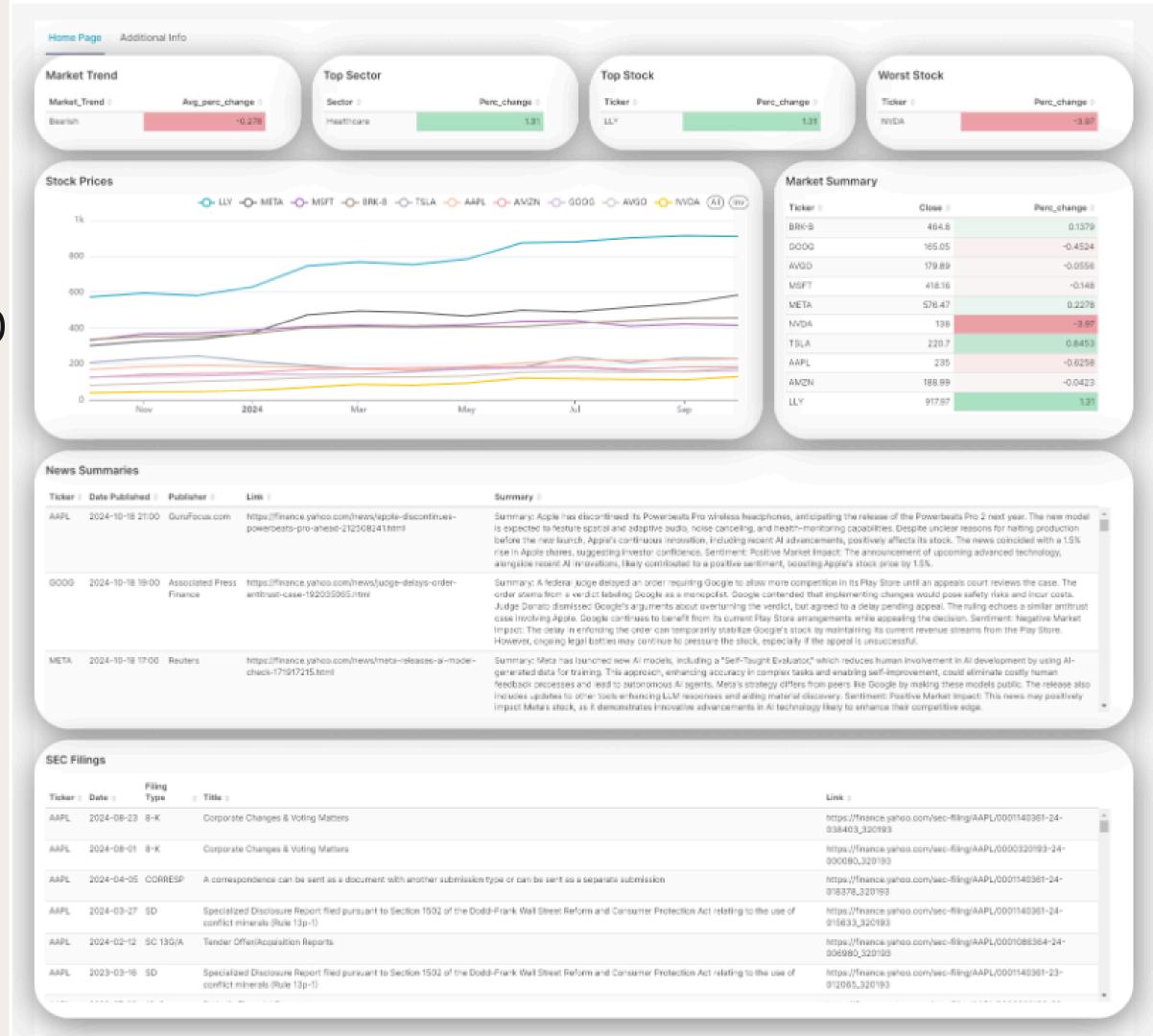


### **Reporting Tables**

## Phase 1 Recap

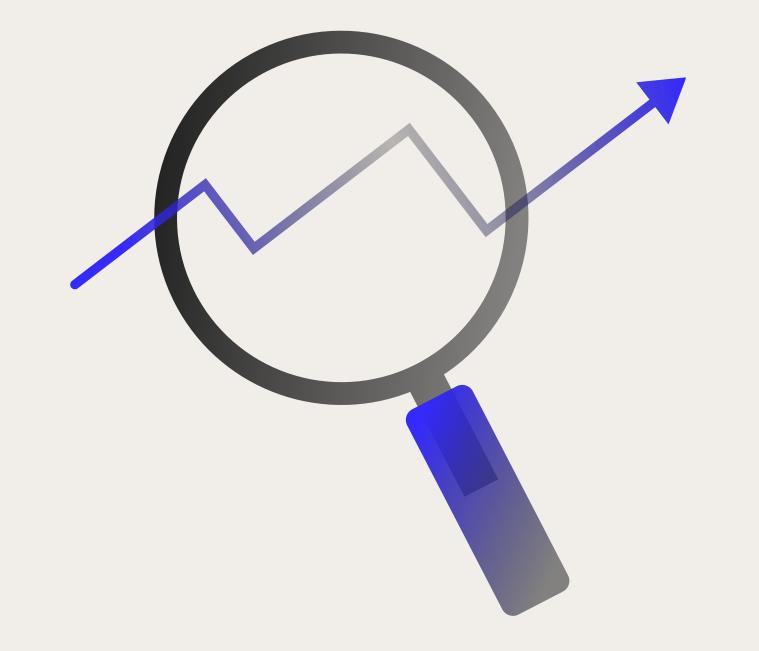
- Dashboard Tracking top 10
   Stocks
- Automated Daily Pipeline using Yfinance API
- Reporting Via Superset







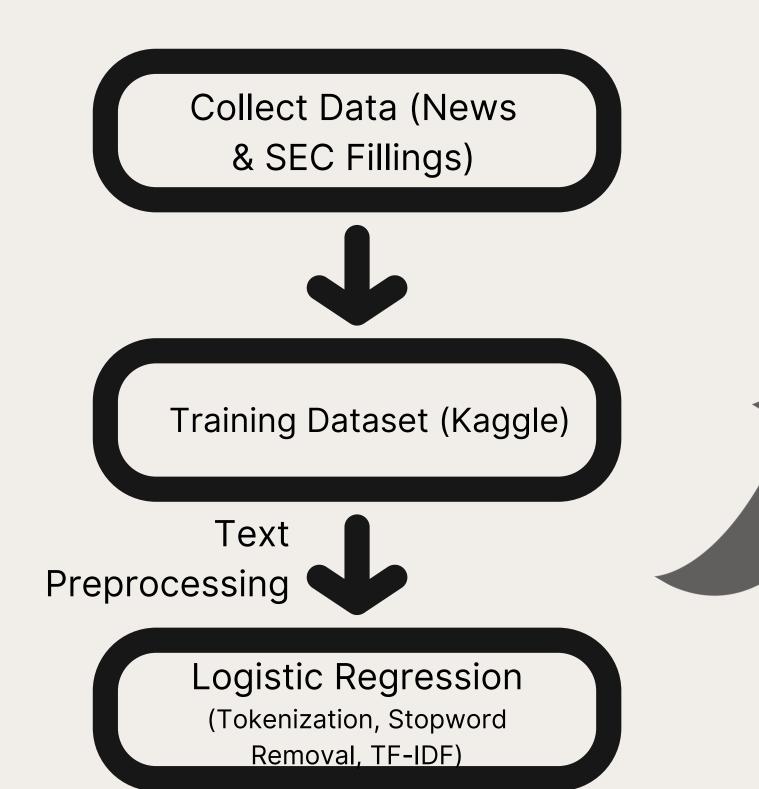
## Analytics -Sentiment Analysis



# Model Training & Selection

Model Choice - Logistic Regression

Feature Engineering -TfidfVectorizer



**Model Deployment** 

ml-postwc-train-sentiment ml-postwc-serve-sentiment

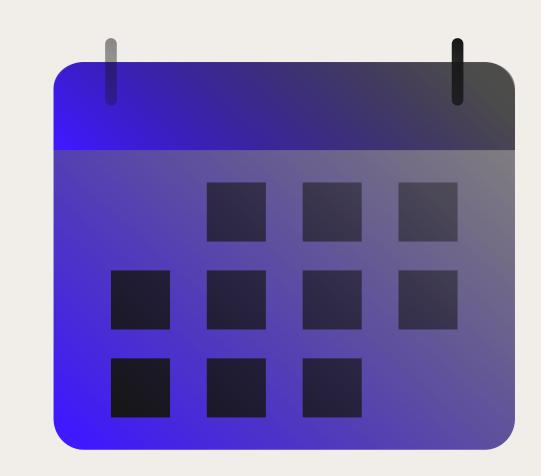
Real-Time Sentiment Classification



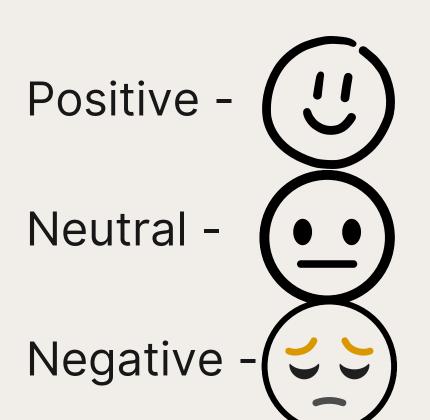
Integration into Pipeline and Motherduck

## Live Demo

### Sentiment Analysis Prediction



### **Sentiments**



### **News articles**

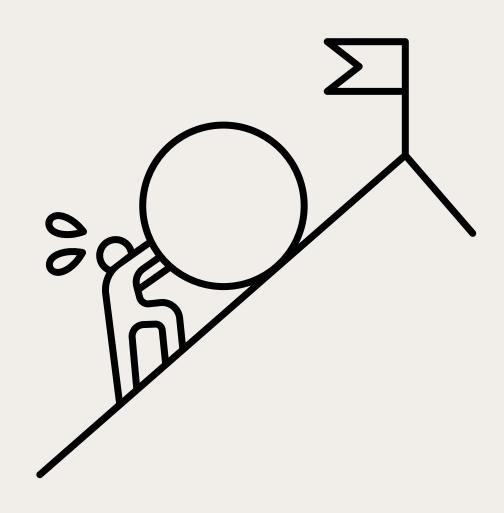
"Meet the Unstoppable Stock That Could Join Apple, Nvidia, Microsoft, Alphabet, Amazon, Meta, and Taiwan Semiconductor Manufacturing in the \$1 Trillion Club by 2035",

"iPhone 16 Sales Surge 20% in China, Boosting Apple's Al-Driven Growth Outlook",

"Apple Discontinues Powerbeats Pro Ahead of Powerbeats Pro 2 Launch, Shares Rise 1.5%t

## Challenges

- Integrating custom ML models into our data pipeline
  - errors related to data formatting, model configuration
- Serverless ML integration
  - trained and deployed our sentiment analysis on a sample dataset
  - require further refine our approach to integrate the trained model with the existing infrastructure (ex. Prefect and Streamlit)
- Addition of new data to pipeline
  - New stocks



## Next Steps

Prefect
Integration &
Automation

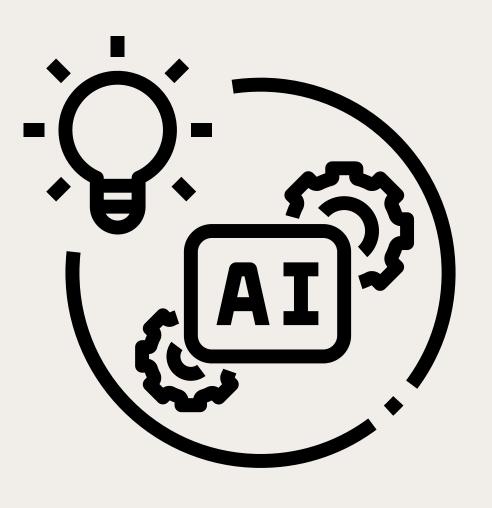
Incorporate sentiment analysis, enabling a fully automated pipeline includes ML predictions for daily market data updates

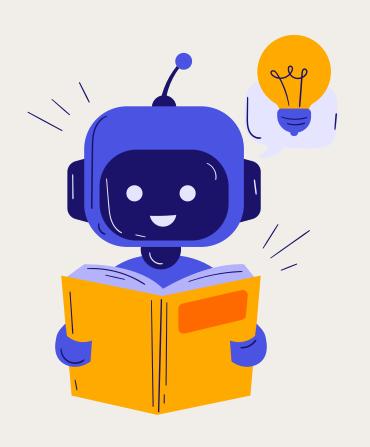
Advanced
Summarization
& Analysis

Refine the summarization of News articles and SEC Filings using LLMs

Reporting

Integrate Interactive Features in an interface through Streamlit(ex. Chatbot)





## ThankYou

