Forecast of Stock Price By Public Sentiment

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Background

- Vast amounts of finance-related information posted on **social media**
- Public sentiment regarding stock market is helpful for **forecast of stock price**

Goal

- Predict **public sentiment** regarding stock markets based on streaming data from social media (Twitter)
- Investigate relationships between trends of **stock prices** and **daily change of public sentiment** (time-series)
- Generate **Long/Short Strategy** for users to maximize their benefits every day

Data Source

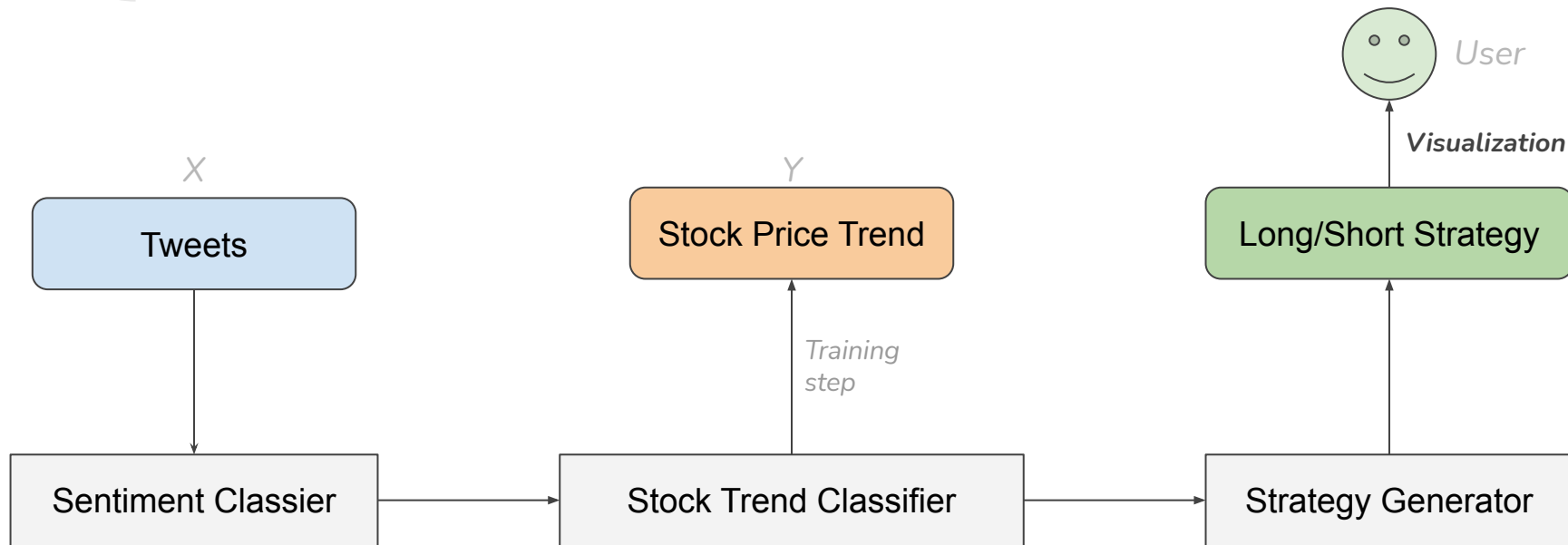|	Social Media Data	Stock Price Data
Training	**NASDAQ100:** 100 NASDAQ Companies & Tweets within 79 Days	
Validation	**Twitter API:** Real-time tweets	**polygon.io API:** Real-time stock prices

Method

Sentiment Prediction	Stock Price Prediction	Long/Short Strategy
Hugging Face: Pre-trained transformers	**LSTM model:** For time-series sentiment	**Decile Spread Portfolio**

Schedule

Date	Work	Assign
11.5-11.18	Process raw text of tweets and stock price data	Chen
	Build sentiment classifier Construct time-series dataset of daily sentiment	Su
	Build & Train stock trend classifier	Huang
11.19	**Intermediate Presentation**	
11.20-12.10	Build & Train strategy generators	Chen
	Validate effectiveness on real-time data	Su
	Build visualization website of system output	Huang
12.11-12.16	**Slides & Video**	