Marketing Analytics

Project Proposal

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Introduction and Motivation:

I chose to analyze META (formerly Facebook) due to its pivotal role in digital marketing and social media. The company's adaptive strategies in response to market shifts, including its focus on AI and emerging technologies, make it an interesting subject for analysis. My primary interest lies in evaluating how META's public perception and financial performance are influenced by market sentiment, particularly in light of recent trends in hedge fund investments.

Dataset:

Data Source: Yahoo Finance

https://github.com/KarthikeyanBaskaran/Marketing-Analytics/blob/main/Individual%20Project/meta_news_articles.csv

I manually scraped the data, and the code for the scraping process is available in the GitHub repository.

Industry: Social Media and Digital Advertising

Dataset Details:

The dataset consists of articles and information related to META, focusing on hedge fund sentiment and stock performance. Key features include:

Features	Description
Title	Title of the article
Link	URL to the article
Short Body	Summary of the article
Additional Info	Extra context
Source	Source of the information
Posted Date	Date the article was published

The dataset spans the latest articles, providing insights into recent market perceptions and trends as of October 2024.

Market Problem:

Initial analysis suggests a potential issue with the disconnect between public sentiment and META's actual market performance. While hedge funds may exhibit bullishness toward META, it is crucial to investigate whether the sentiment expressed in recent articles aligns with sustained financial growth and user engagement. I will focus on:

- The relationship between sentiment derived from news articles and META's stock performance.

- Analyzing how variations in public sentiment impact investor perception and market trends

Problem Approach/Solving the Problem:

To tackle the identified market problem, I will employ the following approach:

1. Data Cleaning: Ensure the dataset is free of duplicates and inconsistencies.

2. Exploratory Data Analysis (EDA): Analyze the frequency of positive versus negative articles and their potential impact on stock performance.

3. Visualizations: Create visual representations to showcase trends in hedge fund sentiment and stock price movements.

4. Sentiment Analysis: Apply natural language processing techniques to gauge public sentiment from the articles.

5. Conclusion: Summarize insights and recommend strategies for META to align its marketing efforts with market sentiment.

Tools:

- Programming Language: Python

- Libraries: NumPy, Pandas, Seaborn, NLTK (for sentiment analysis)

- Environment: Jupyter Notebook

- Visualization Tool: Tableau

Timeline:

Task	Estimated Completion Date
Data Cleaning	Week 1
Exploratory Data Analysis	Week 2
Visualizations	Week 3
Sentiment Analysis	Week 4
Conclusion and Report	Week 5