



**BENNETT
UNIVERSITY**

TRADESTREAM

intelligent model design using A.I

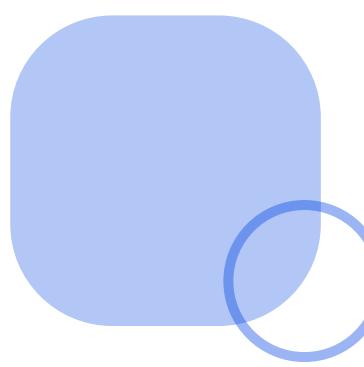
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INTRODUCTION



01

What is TradeStream?

- A machine learning-based system to predict stock market trends.
- Leverages real-time news and articles for immediate evaluation.

02

Why is this important?

- Market sentiment can significantly influence stock prices.
- Traditional stock prediction models do not incorporate real-time sentiment from news.

PROBLEM STATEMENT



Challenges in Stock Prediction

Financial markets are influenced by a wide range of factors, including economic data, market sentiment, and current events.

Existing stock prediction models often fail to incorporate real-time textual data.

There is a need for a system that can analyze and predict stock prices based on the latest news and articles.

OBJECTIVES



Primary Goal:

Develop a machine learning system capable of predicting stock price movements using real-time news articles.



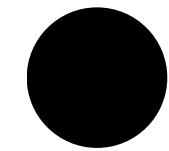
Sub-objectives

Apply Natural Language Processing (NLP) to extract sentiment and important information from news articles.

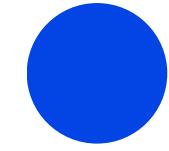
Integrate sentiment analysis into a predictive model for stock price forecasting.

Provide instant evaluation and predictions based on the latest news.

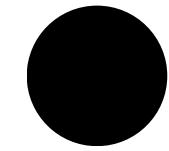
SYSTEM ARCHITECTURE



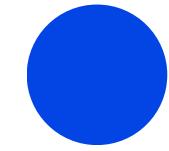
Data Collection: Scraping real-time news articles from financial news websites.



Natural Language Processing: Using NLP techniques for sentiment analysis.



Stock Market Data: Historical and real-time stock price data. A hybrid model combining sentiment analysis with stock data



Instant Evaluation: Immediate prediction generation based on current news.

PREDICTION MODEL

Sentiment Analysis:

- Preprocessing news data (tokenization, stopword removal, stemming/lemmatization).
- Sentiment classification using pre-trained models (BERT or other transformers).

CNN and Machine Learning:

- Combining stock data and sentiment analysis results.
- CNN model to predict stock trends (uptrend, downtrend, neutral).
- Evaluation metrics (accuracy, precision, recall).

CODING REQUIREMENTS

Language: Python



Libraries:

Requirements

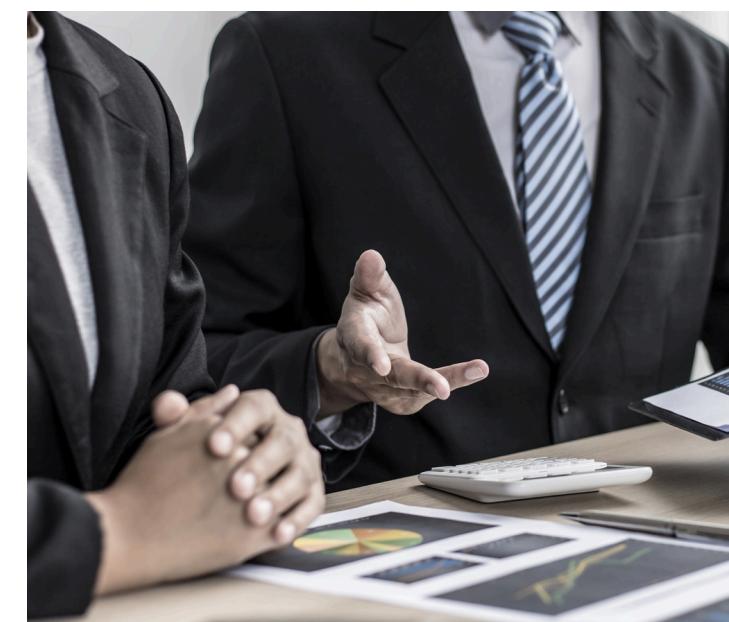
- **NLP and Data Handling:** nltk, spaCy, transformers, pandas
- **Web Scraping:** BeautifulSoup, requests
- **Machine Learning and CNN:** scikit-learn, tensorflow, keras
- **Visualization:** matplotlib, seaborn

CONCLUSION

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- Key Takeaways:

- TradeStream offers a novel approach by integrating real-time news with machine learning models to predict stock trends.
- The system can assist investors by providing real-time insights based on current events.
- Future work includes expanding data sources and refining prediction accuracy.





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THANK YOU

FOR YOUR ATTENTION

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