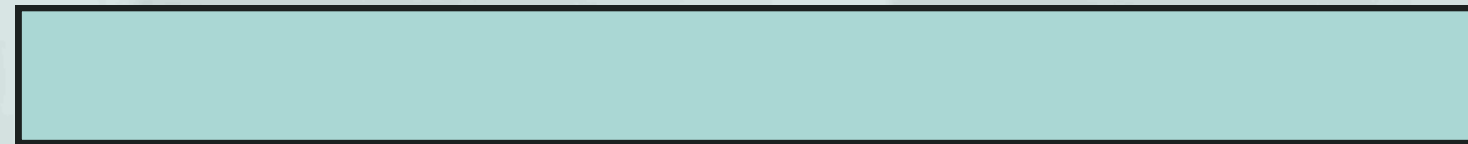


REAL-TIME SENTIMENT ANALYZER



Executive Summary

- Analyzes text and classifies as Positive, Negative, or Neutral
- Features: Confidence score, visualization, word cloud
- Built using Flask web app, Logistic Regression, and TF-IDF



Why Sentiment Analysis?

- Online opinions shape brand reputation and insights
- Helps summarize comments, track trends, and detect negative signals
- Goal: A practical, explainable, and accessible tool

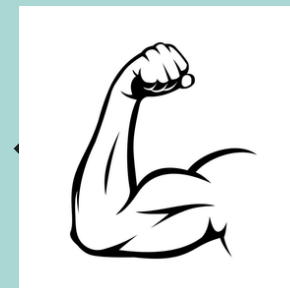
The Data



Dataset: IMDB 50K Movie Reviews (balanced, labeled)



Rich in sentiment signals and widely used for benchmarking



Large enough for robust training

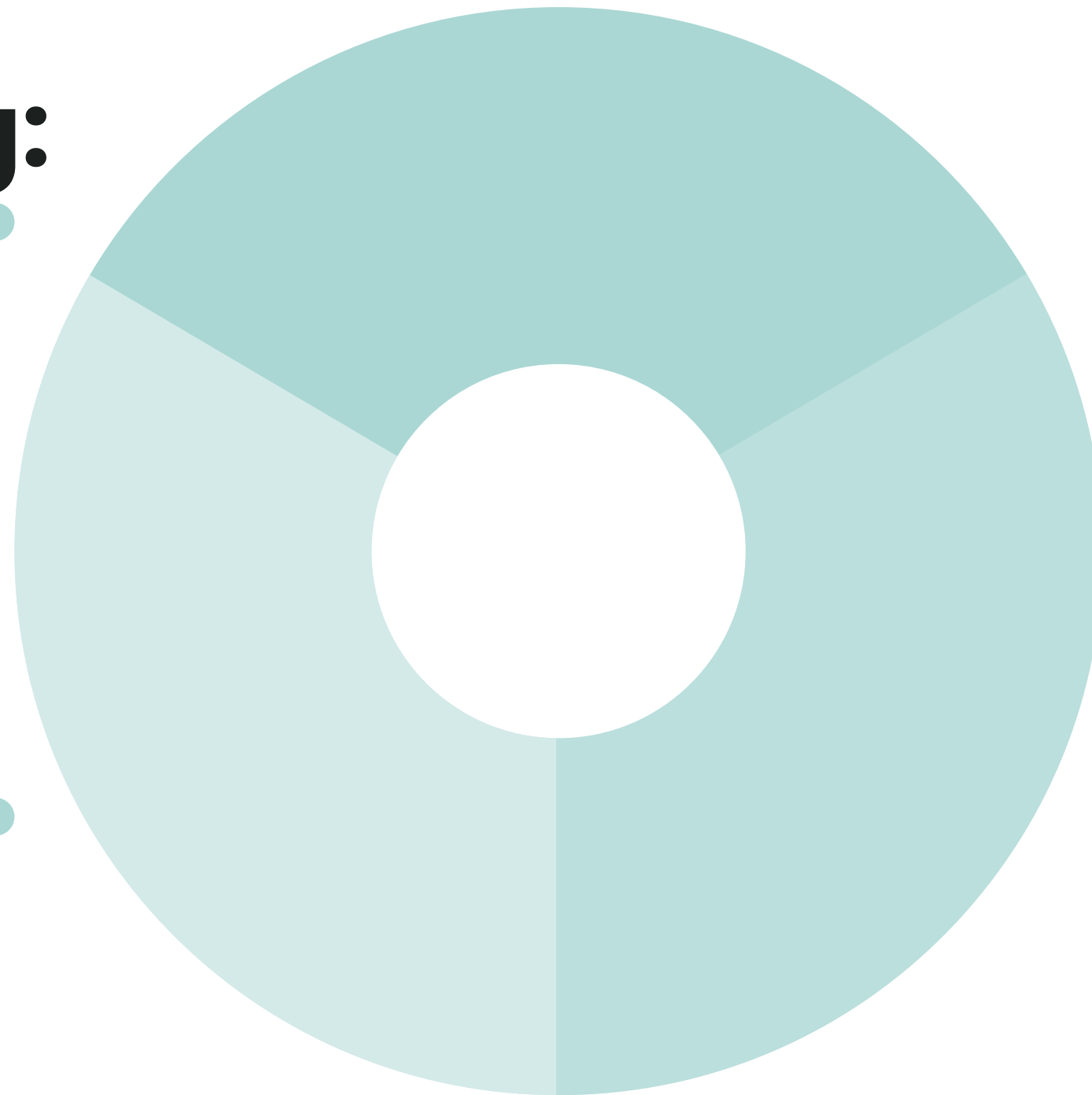
Pipeline Overview

Text cleaning:

- Lowercase, remove HTML, punctuation
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Text preparation:

- Tokenization and lemmatization



Text extraction:

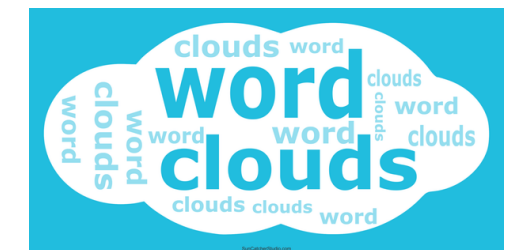
- Feature extraction with TF-IDF

Model:

- Prediction with Logistic Regression

Web App Features

- Built with Flask, single-page interface
- Displays sentiment label, confidence score, doughnut chart
- Includes word cloud and influencing words



Strengths & Limitations



Strengths

End-to-end pipeline,
explainable,
lightweight



Limitations

Domain-specific
issues, simple Neutral
handling, sarcasm
challenges

Future Directions



- Domain adaptation for specific industries



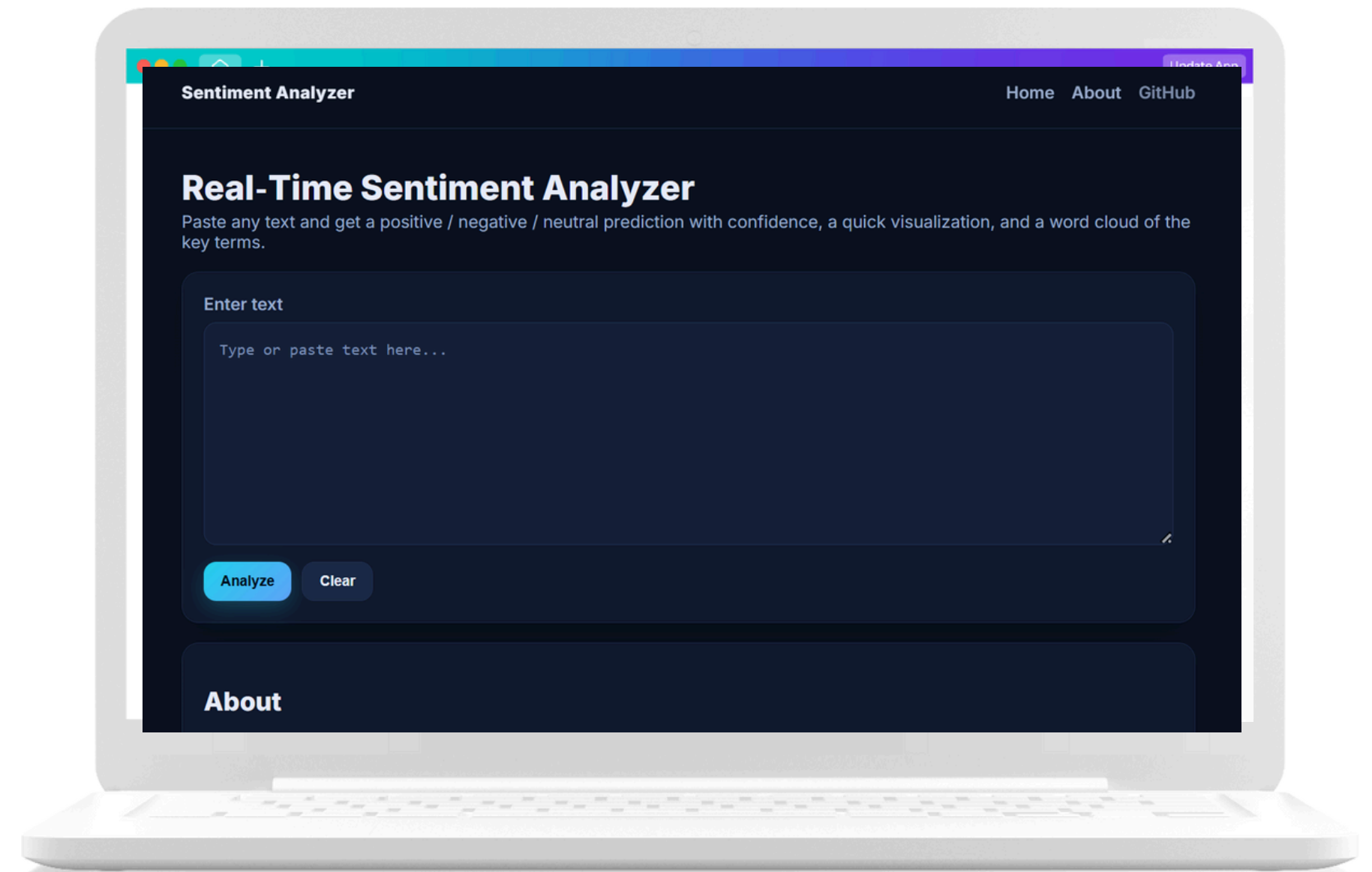
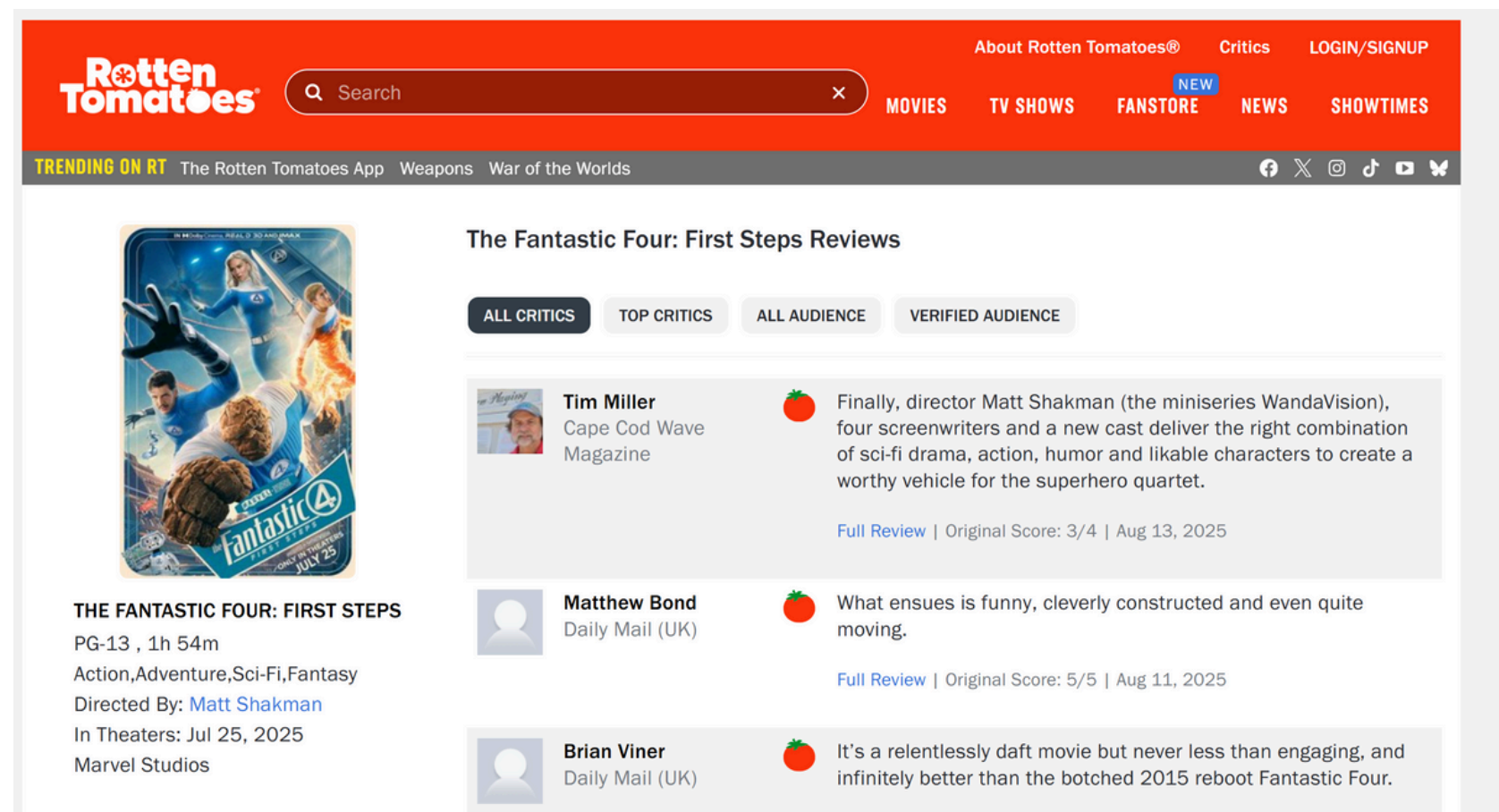
- Transformer models (BERT) for nuanced text



- True three-class model and live data connectors

Mock up

Movie's Reviews



**Thank you
very much!**