Customer Sentiment Analysis

By Ethan Huffman

Business Understanding

- Social media feedback

- Customer sentiment signals

- Scalable monitoring

- Business risk awareness

Data Understanding

- **Labeled product tweets**

- **Human-reviewed sentiment**

- **Short text context**

- **Platform-specific language**

- **Limited tweet context**

- **Sarcasm and tone**

- **Subjective human labels**

- **Platform-specific data**

Data Analysis

- **Cleaned tweet text**

- **Removed neutral posts**

- **Text feature creation**

- **Sentiment distribution**

Modeling

- Baseline model

- Improved class weighting

- Negative recall focus

- Final model selection

Confusion Matrix — Final Sentiment Model

	Predicted Negative	Predicted Positive
Actual Negative	Correct Negative 74	Missed Negative 40
Actual Positive	False Positive 78	Correct Positive 518

Actual Sentiment / Predicted Sentiment

Customer Sentiment Analyzer

 "I absolutely love my new iPhone"

"This Google update completely broke my phone. Very frustrating.",

"Apple's new product launch was okay, but nothing really impressed me

Customer Sentiment Analyzer · Streamlit

Conclusion

- **Automated sentiment detection**

- **Business-focused tradeoff**

- **Deployed proof concept**