



# Sentiment Analysis of Amazon Reviews

*Using Multiple Models*

# Agenda

- *Introduction*
- *Importance*
- *Methodology*
- *Algorithms*
- *Progress*
- *Accuracy Metrics*
- *Remaining Work*
- *Screenshots*
- *Questions*

# Introduction

- *In the e-commerce landscape, customer reviews wield significant influence on product reputation and consumer decisions.*
- *Sentiment analysis of Amazon reviews provides valuable insights for businesses.*

# Importance of Sentiment Analysis

## *Significance*

- *Customer reviews shape product perceptions and influence purchasing decisions.*
- *Understanding sentiments aids businesses in enhancing customer satisfaction and product improvements.*

# Methodology

## TextBlob & VADER

- *Data loaded from Amazon review CSV file.*
- *Preprocessing performed to ensure compatibility with sentiment analysis libraries.*
- *Sentiment analyzed using TextBlob and VADER.*

# Algorithms

## TextBlob

- *TextBlob: NLP library for sentiment analysis.*
- *Sentiment classified as positive, negative, or neutral based on polarity score*

# Algorithms

## VADER

- *VADER: Pre-built sentiment analysis tool designed for social media text.*
- *Sentiment classified as positive, negative, or neutral based on compound score.*

# Progress

- *Implementation of sentiment analysis using TextBlob and VADER.*
- *Sentiment labels added as new columns in the dataset.*
- *Accuracy evaluated against true labels derived from the 'overall' column.*



# Accuracy Metrics

## *Accuracy of Models*

- *Accuracy TextBlob: [81.81%]*
- *Accuracy VADER: [76.35%]*

# Screenshots

## Proof of Progress

### ► Accuracies

Accuracy TextBlob: 0.8181078331637843

Accuracy VADER: 0.7635808748728382

# Remaining Work

## Recommendations & Improvements

- *Fine-tuning Models: Enhance models to better suit Amazon review characteristics.*
- *Visualization: Implement visuals for deeper sentiment distribution insights.*
- *Explore Transformer Models: Experiment with models like BERT for improved accuracy.*

# Conclusion

*1. Insightful Sentiment Analysis*

*2. Accurate Evaluation*

# Q & A

- ▶ If you have any questions, please ASK.

# Thank You