

# **TWITTER SENTIMENT CLASSIFICATION:**

## **APPLE VS GOOGLE PRODUCTS**

Phase 4

# GROUP 6

# MEMBERS

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## THE PROBLEM

Can we predict whether a tweet expresses **positive**, **neutral**, or **negative** sentiment about Apple or Google products?

## WHY IT MATTERS

Tweets are a concise, informal and sentiment-rich that help us understand customer satisfaction and public opinion.



**1**

Collected labelled  
tweets from 9000+  
tweets



**2**

Cleaned and  
preprocessed text  
using python language



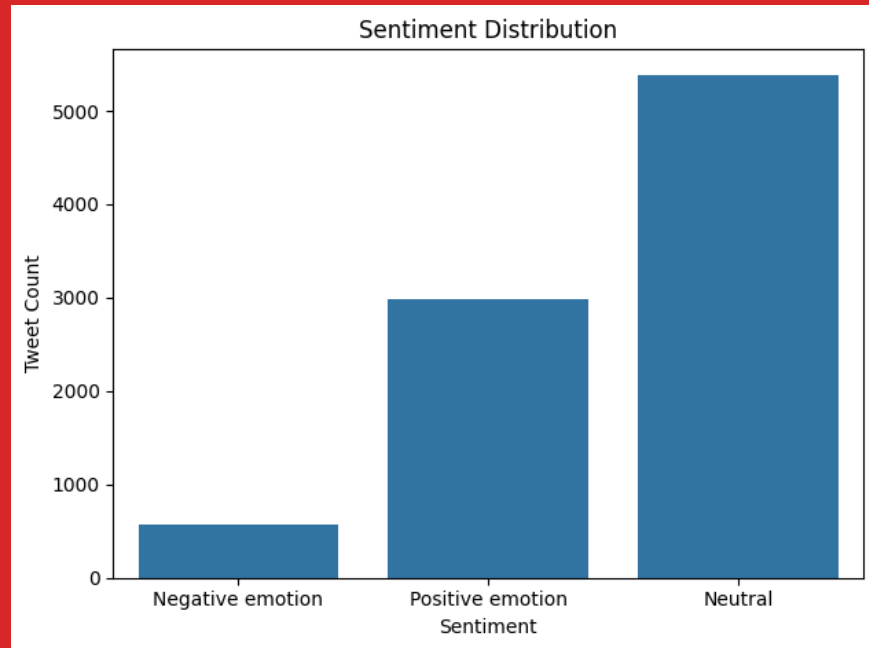
**3**

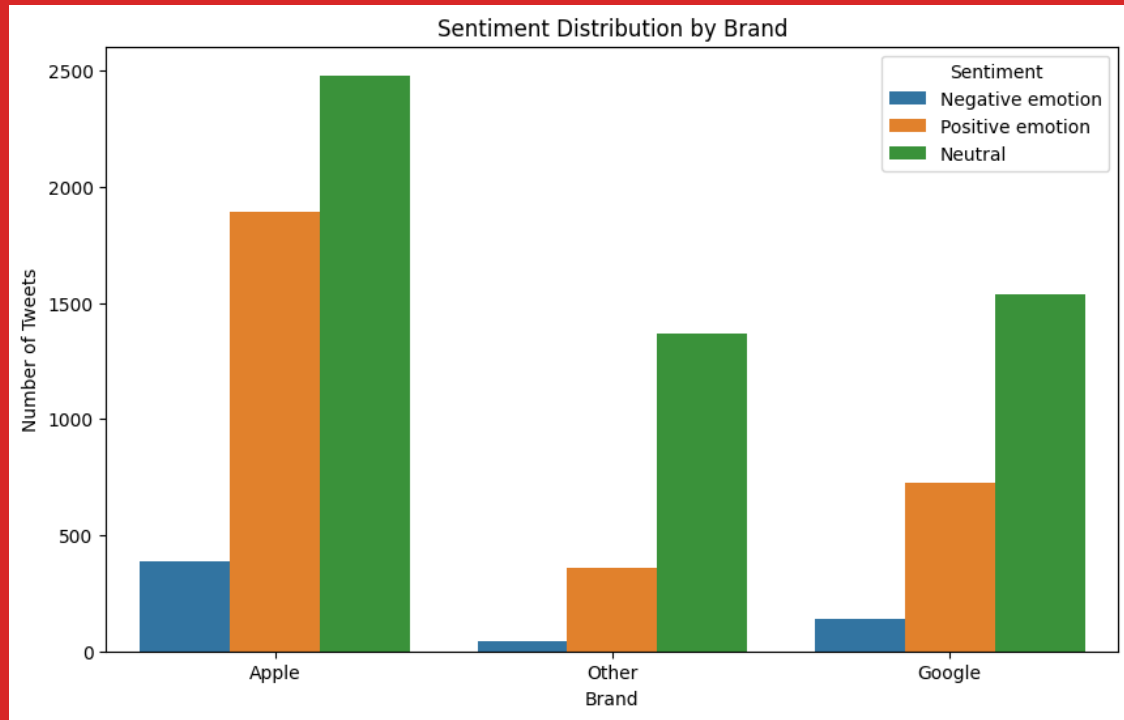
Used ML to predict  
sentiment



# WHAT WE DID

# DATA INSIGHT





**DATA  
INSIGHT**



# MODELLING

	ACCURACY	F1 SCORE	STRENGTHS	LIMITATIONS
LOGISTIC REGRESSION	68%	66%	Simple, interpretable, robust results	Slight confusion between neutral/neg
NAIVE BAYES	68%	65%	Fast, work well with sparse data	Struggles with nuanced sentiment
RANDOM FOREST	68%	65%	Captures complex patterns	Less interpretable, slower
NEURAL NETWORKS	65%	Write here your items	Promising baseline with flexibility	Needs tuning, overfits easily

# 68%

**BEST MODEL: LOGISTIC REGRESSION**







1.

Tweets often have  
sarcasm, slang or  
ambiguous tone



2.

Neutral vs.  
Negative often get  
confused

# CHALLENGES



# RECOMMENDATIONS

1

Integrate this with real-time monitoring

2

Try transformer-based models

3

Use sentiment data to inform  
marketing/customer service

**THANK YOU / Q & A**

