TWITTER SENTIMENT CLASSIFICATION: APPLE VS GOOGLE PRODUCTS

Phase 4

GROUP 6 MEMBERS

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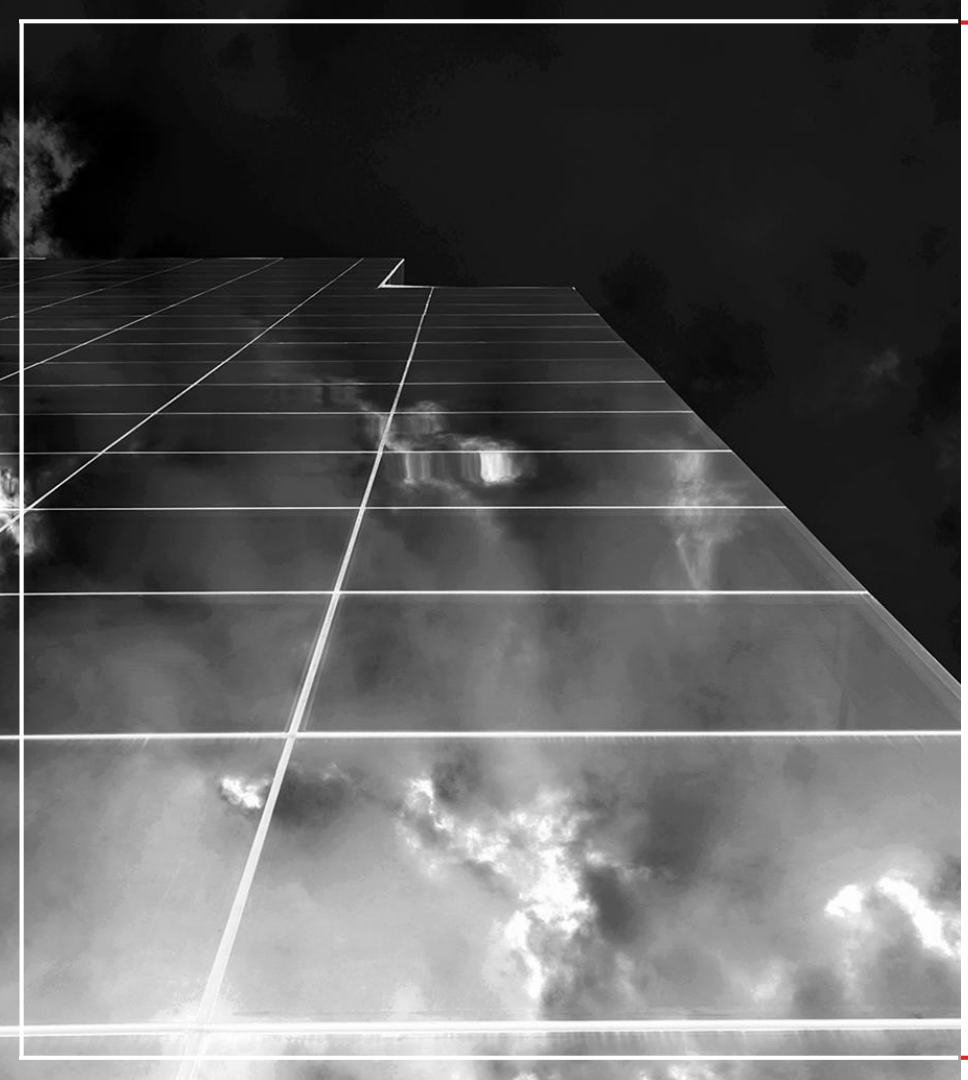


THE PROBLEM

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.

WHAT WE DID

1

Collected labelled tweets from 9000+ tweets

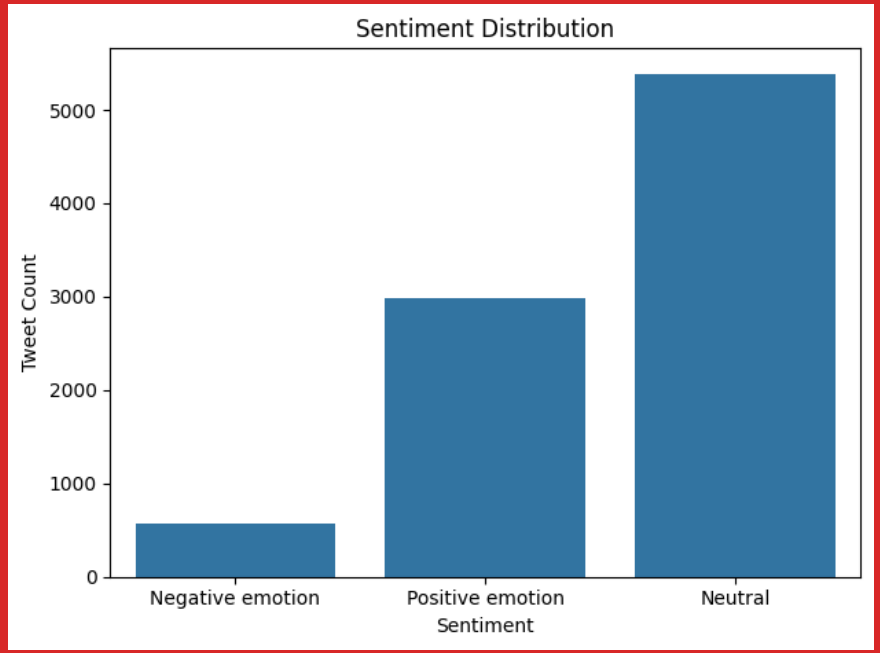
2

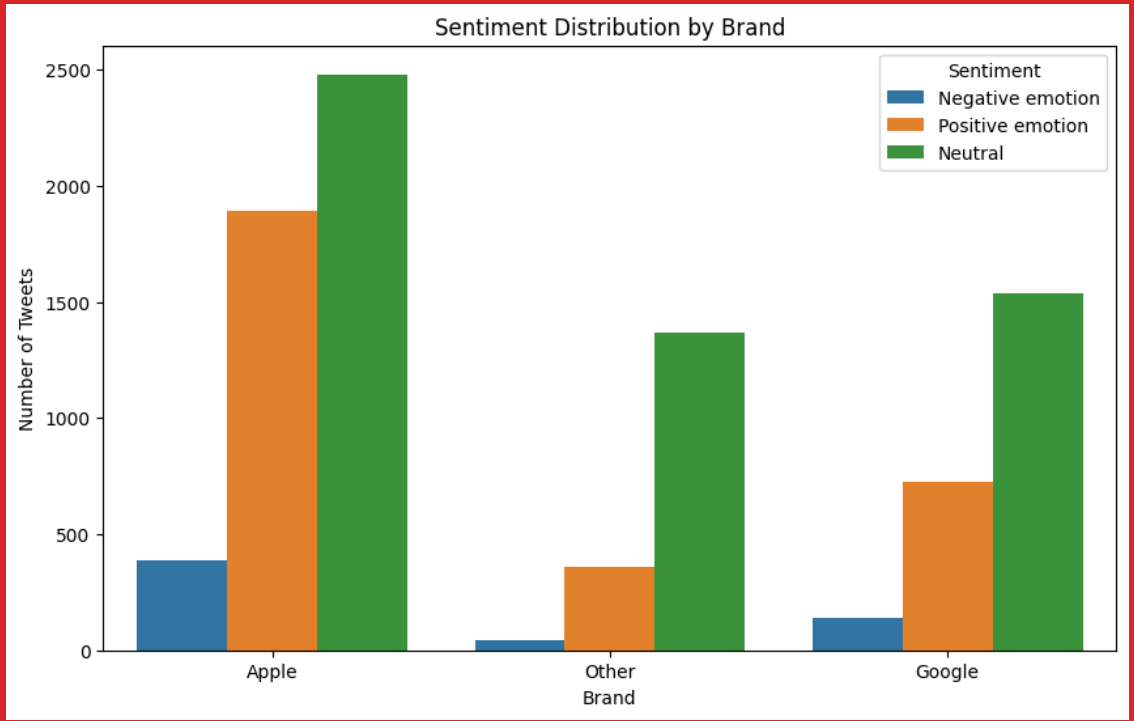
Cleaned and preprocessed text using python language

3

Used ML to predict sentiment

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

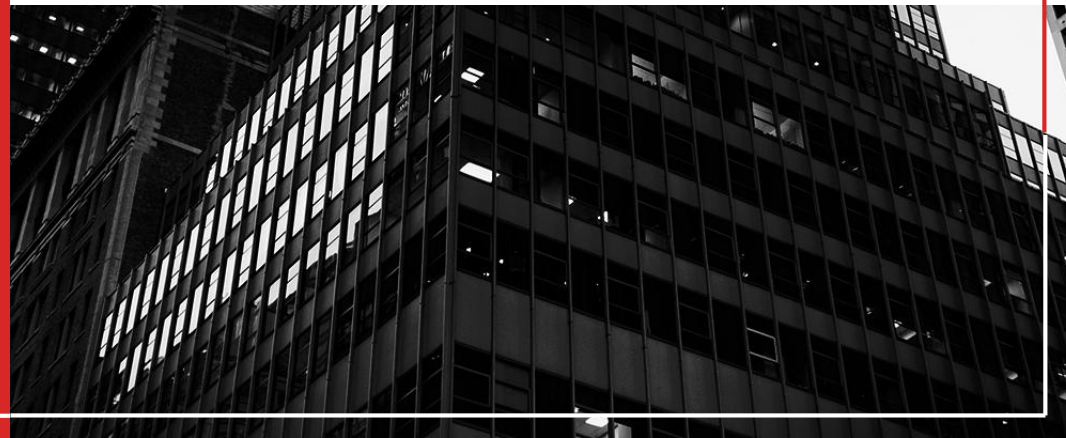
CHALLENGES

1.

Tweets often have sarcasm, slang or ambiguous tone

2.

Neutral vs. Negative often get confused



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