

Twitter Sentiment Analysis

Agenda

- 1 Business Goal
- 2 What is Sentiment Analysis?
- 3 Process
- 4 Our Data
- 5 Words Used
- 6 Model
- 7 US. Airways Example
- 8 Suggestions
- 9 Next Steps



Business Goal

Enhance US Airways' Success.

Data-driven marketing to raise **brand awareness** and **ROI**.

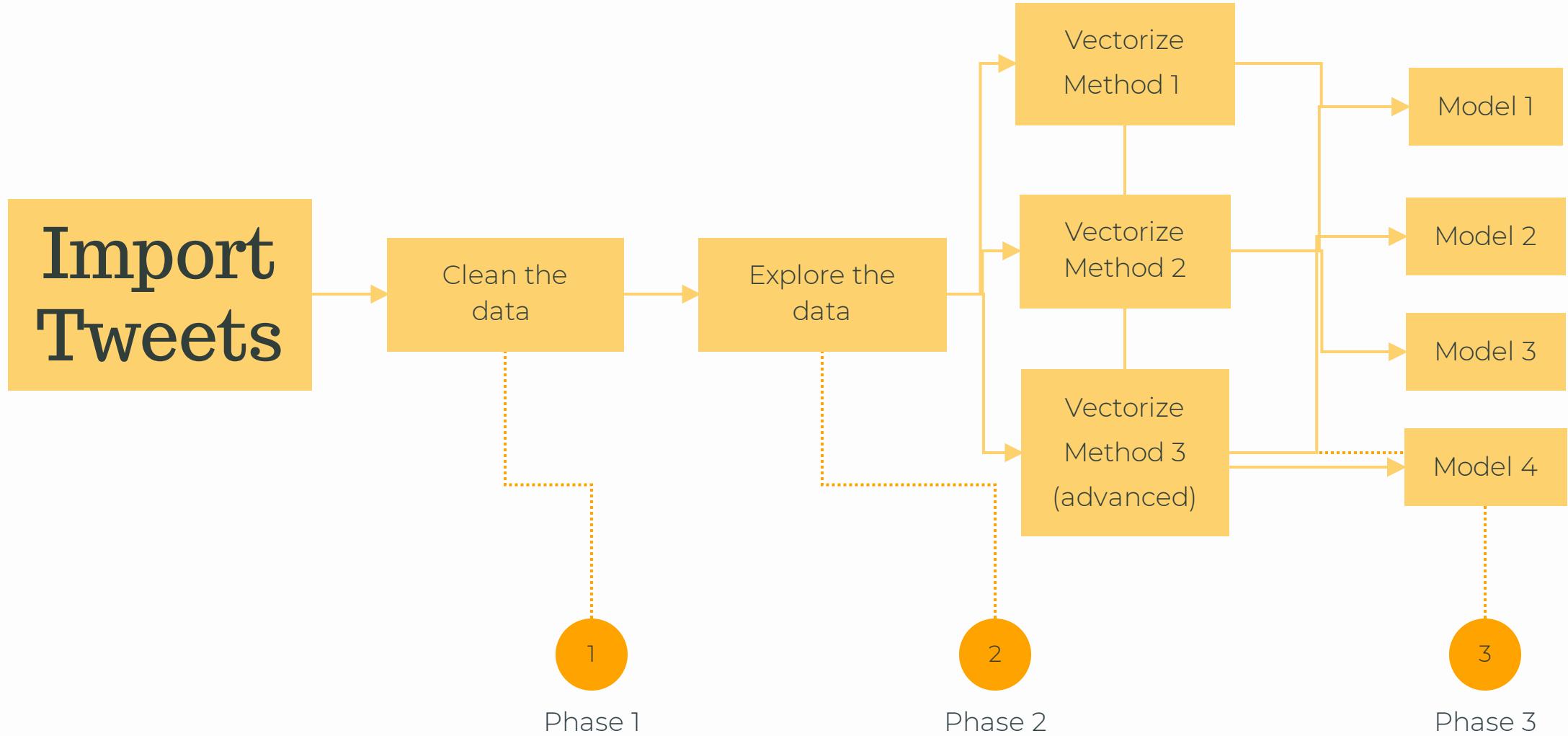
Using machine learning for tweet sentiment analysis, we carry out **real-time assessments** to find strengths and areas that need improvement..

 U.S AIRWAYS

What is Sentiment Analysis?



The Process



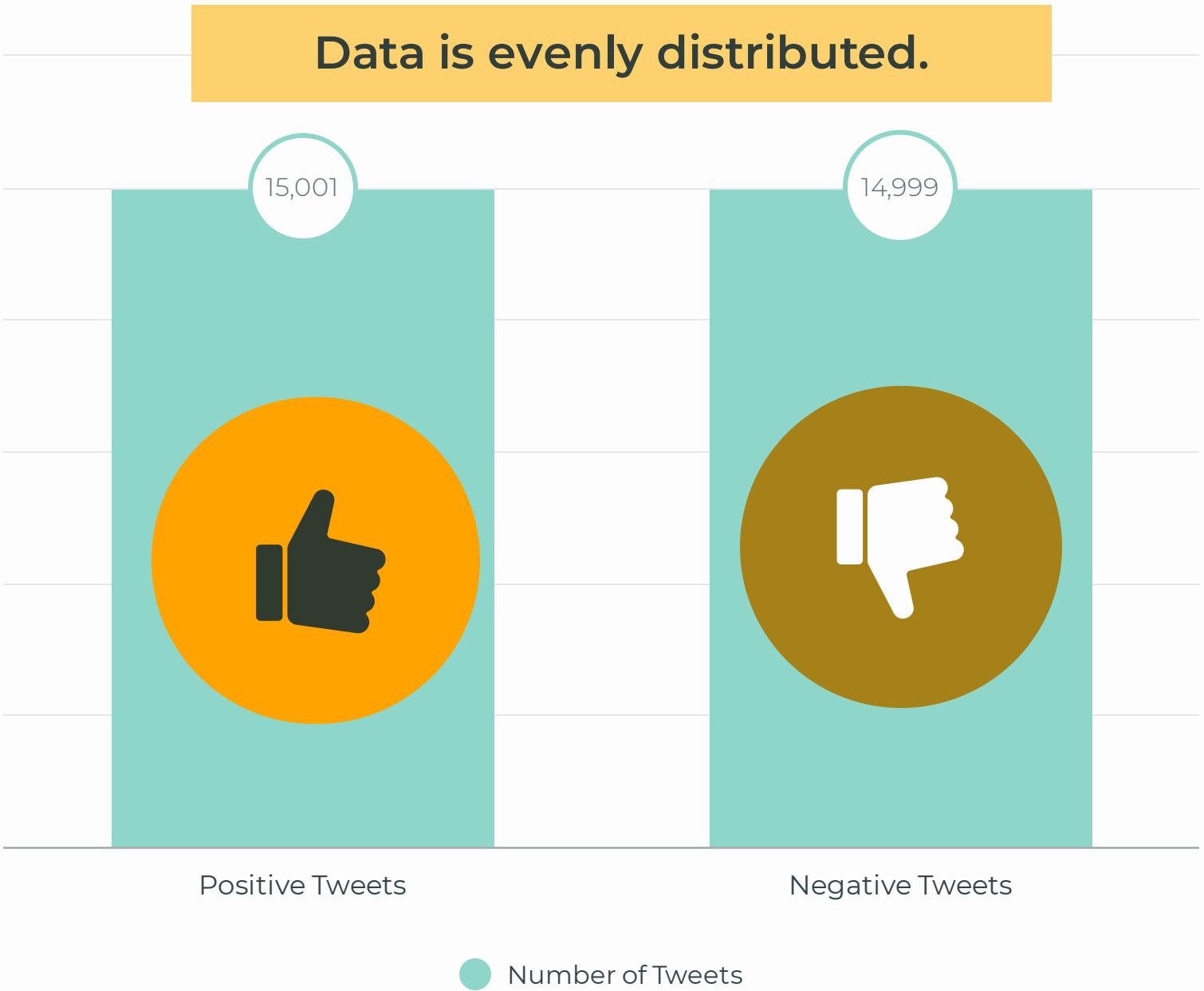
Our Data

Source: Kaggle

30,000 Tweets

| Index | Sentiment | Tweet |
|---------|---|--|
| Tweet 1 |  | "can't wait for vegas" |
| Tweet 2 |  | " im meeting up with one of my besties tonight! Cant wait!! - GIRL TALK!!" |
| Tweet 3 |  | " Wrote exactly three lines of dialogue tonight, then gave up" |
| Tweet 4 |  | Hmmm, might go to bed |

Positive, Negative
Sentiment Break Down

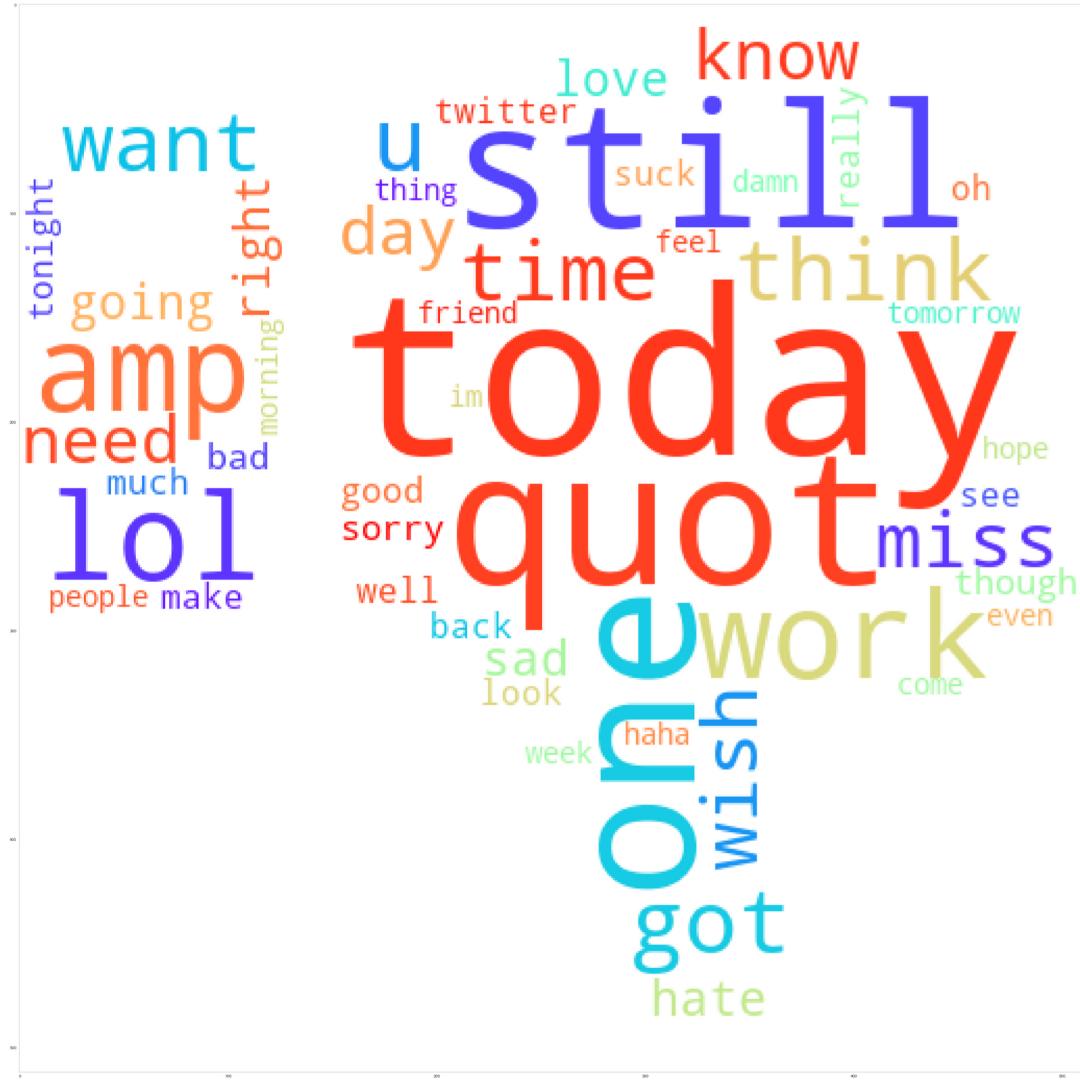


think
amp
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one
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awesome
people
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watching

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twitter
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good morning
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Positive

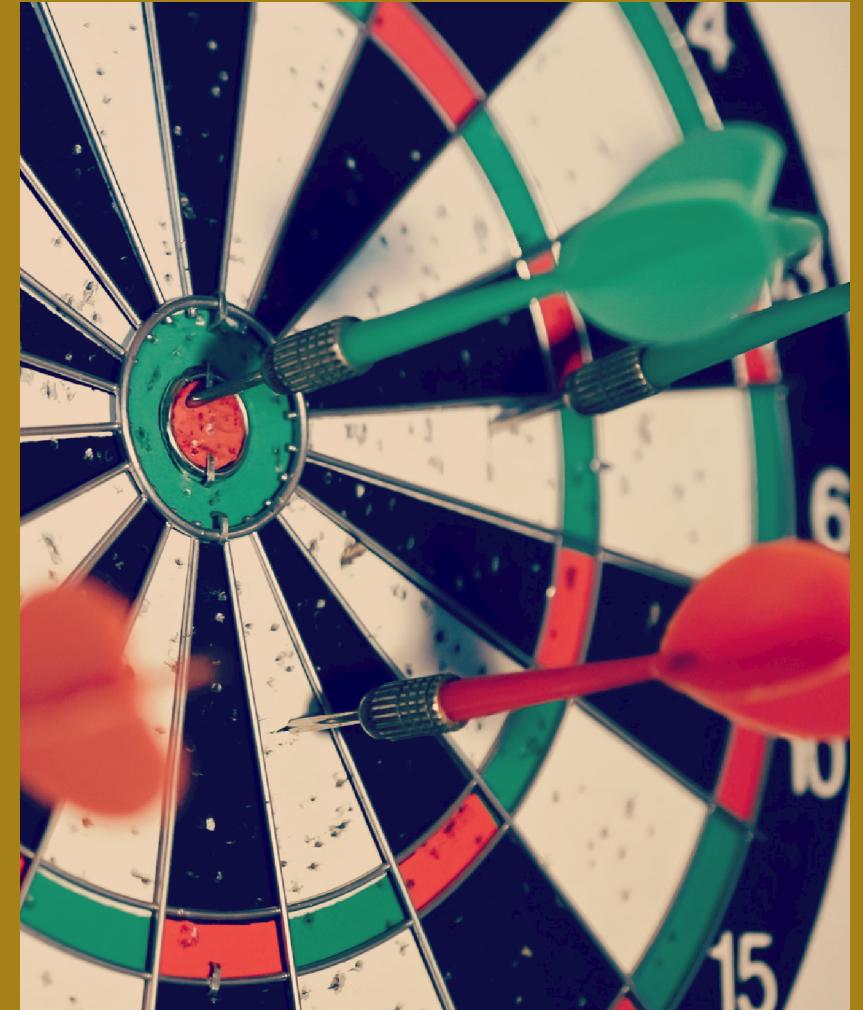
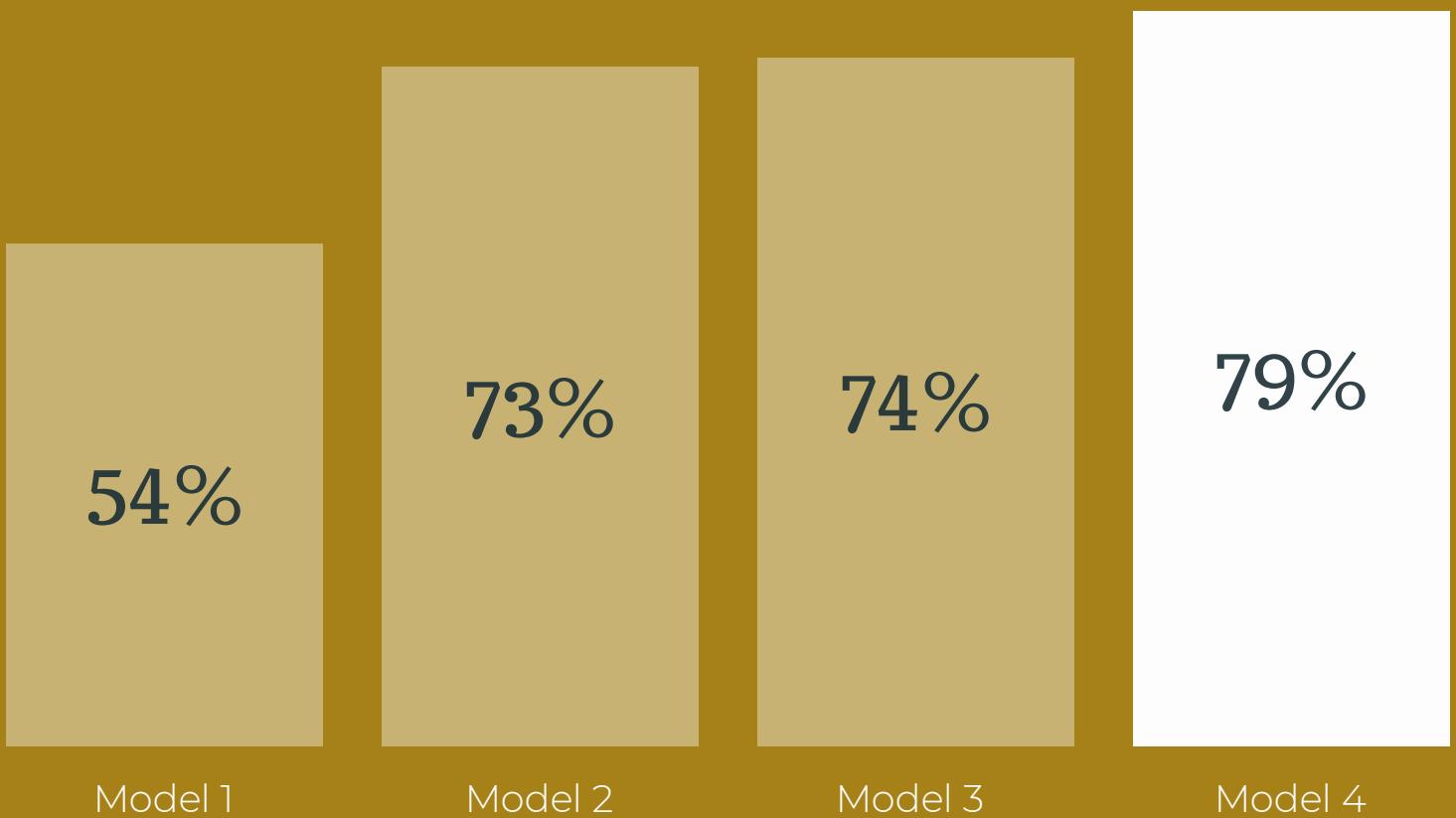
Focus on feelings
of appreciation,
laughter and
love.



Negative

Expressing feelings
of dissatisfaction,
frustration, and
unfulfilled need.

Comparing Models





Model Evaluation

Model 4

1,000,000 Tweets

79%

Our model was able to predict 79% of the time whether a tweet was positive or negative.



Business Application

Airlines, Tweets



2,363 Tweets



2,363 Tweets

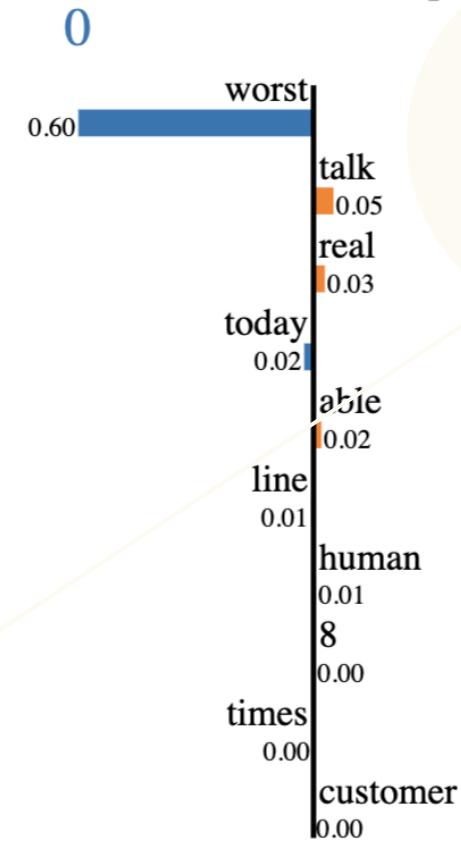
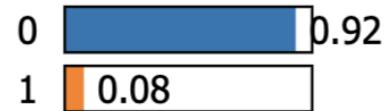


Our model predicted tweet sentiment (positive/negative) with 73% accuracy.



US Airways, Example

Prediction probabilities



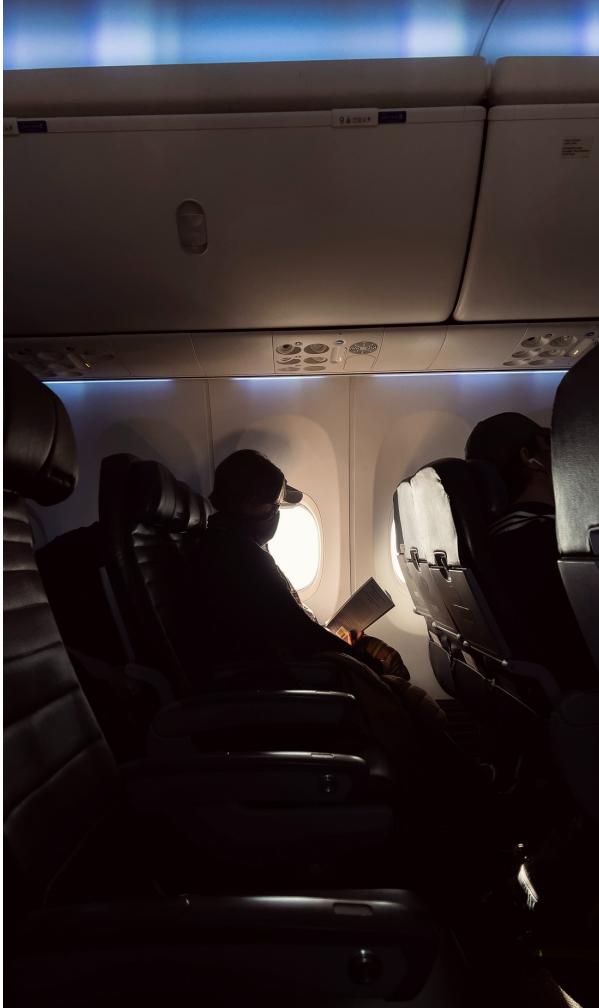
"worst customer service line called 8 times today able talk real human."

Text with highlighted words

worst customer service line called 8 times today able talk real human

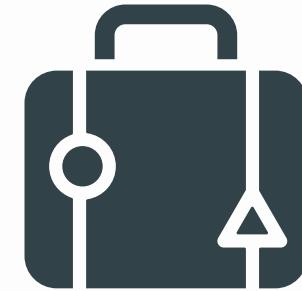
US Airways, Negative Tweets

Main Topics from
408 tweet



flight
sucks
trying
bag help
hour
service
delayed
miss
stuck
customer

Suggestions based on feedback



Invest in customer
service

Improve flight
delays

Improve baggage
handling processes



Next Steps

Expand the analysis
to a larger dataset

Further refine
the model with
the new dataset

Compare data
with competitors
feedback

Thank
you!

