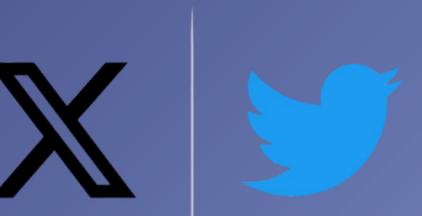
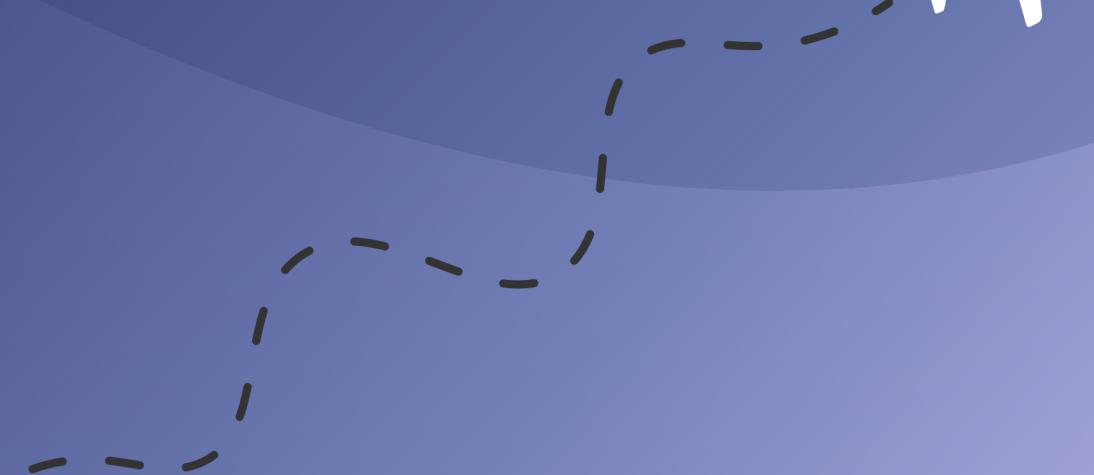




جامعة الإمام عبد الرحمن بن فيصل
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College of Business Administration

Twitter Sentiment Analysis Final Project

MIS 413 – Business Intelligence
Group 3 - Section 203
Supervised By: Dr. Jumanah Alshehri



Agenda

- ▶ Introduction
- ▶ Dataset and Preprocessing
- ▶ Methodology
- ▶ Experiments and Results
- ▶ Dashboard
- ▶ Challenges
- ▶ Conclusion and next step

Introduction



- Problem
- Research Questions

Q1

What are the overall sentiment trends regarding different airlines?

Q2

what factors contribute most significantly to positive or negative sentiments expressed by?

Q3

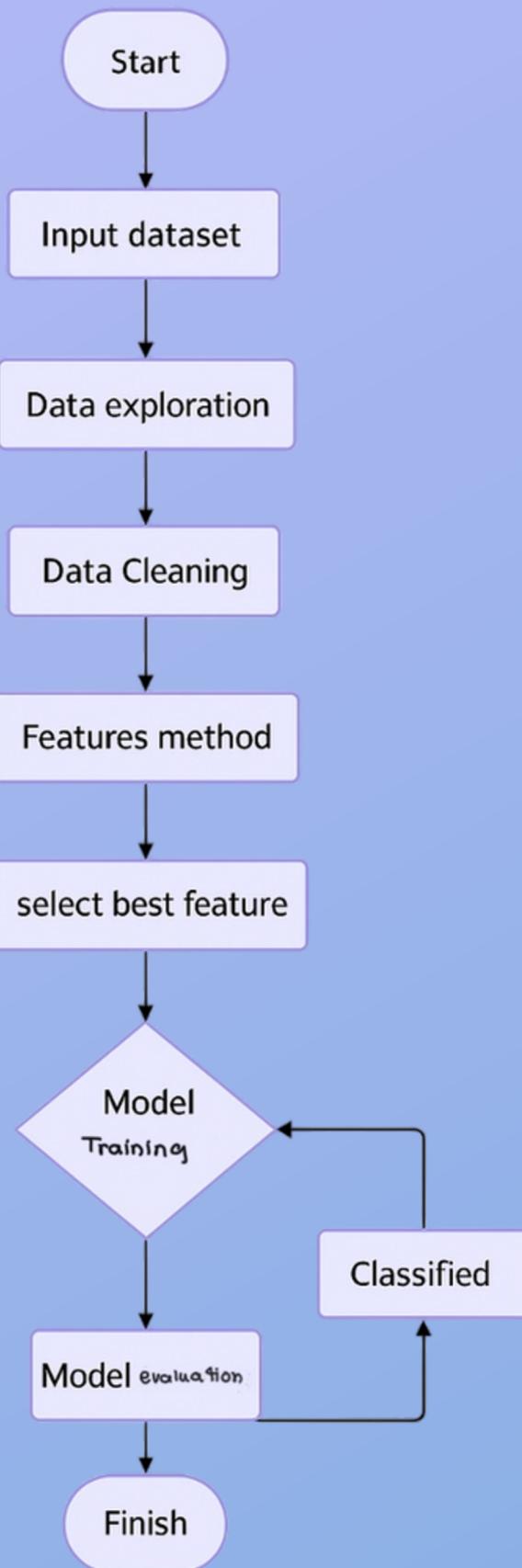
Is it possible to forecast future customer sentiment toward a particular airline using historical flight and incident data?

Dataset and Preprocessing

- Twitter U.S Airline Sentiment dataset as Semi-Structured data.
- Dataset source from Kaggle dataset it's contains people reviews for U.S. airline services.
- The size of the datasets is 3.42 MB which contains 15 columns and 14,640 rows.
- Classified into positive, negative, and neutral tweets.



Data Processing



Methodology

Bayesian classifiers

	Rank	negative	neutral	positive
0	Rank 1	worst	journal	fantastic
1	Rank 2	unacceptable	jblu	excellent
2	Rank 3	ridiculous	flytpa	smooth
3	Rank 4	fail	avgeek	kudos
4	Rank 5	rude	winner	outstanding
5	Rank 6	worse	flyingitforward	awesome
6	Rank 7	hr	street	exceptional
7	Rank 8	lose	nantucket	wonderful
8	Rank 9	hung	imaginedragons	rock
9	Rank 10	disappointed	australia	amazing

The probability of being in a certain category fits a certain category of words according to classification

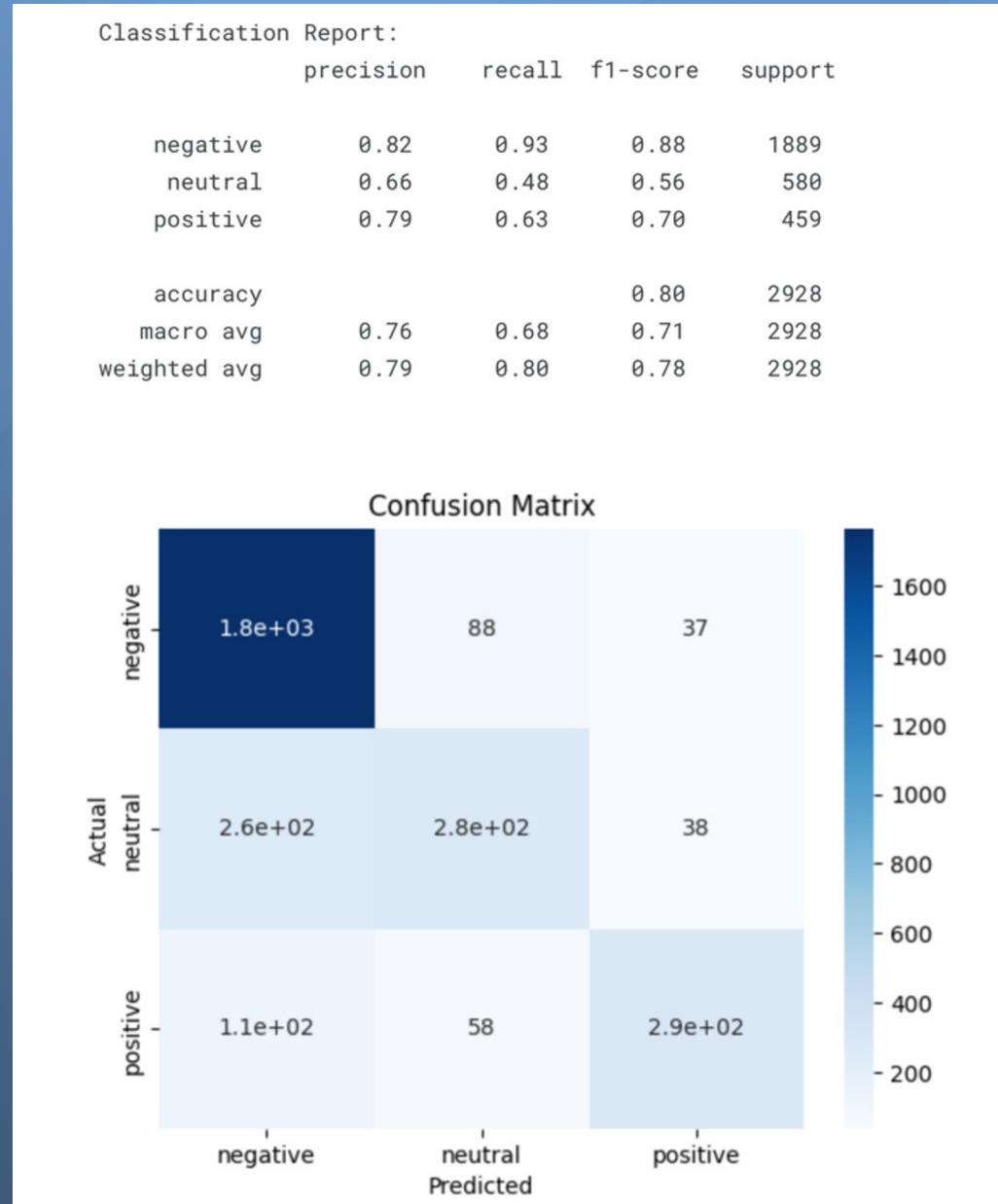
TF-IDF

	agent	airline	boarding
Tweet 1	0	0	0
Tweet 2	0	0	0.5
Tweet 3	0	0.57735	0
Tweet 4	0	0	0
Tweet 5	0.447214	0	0

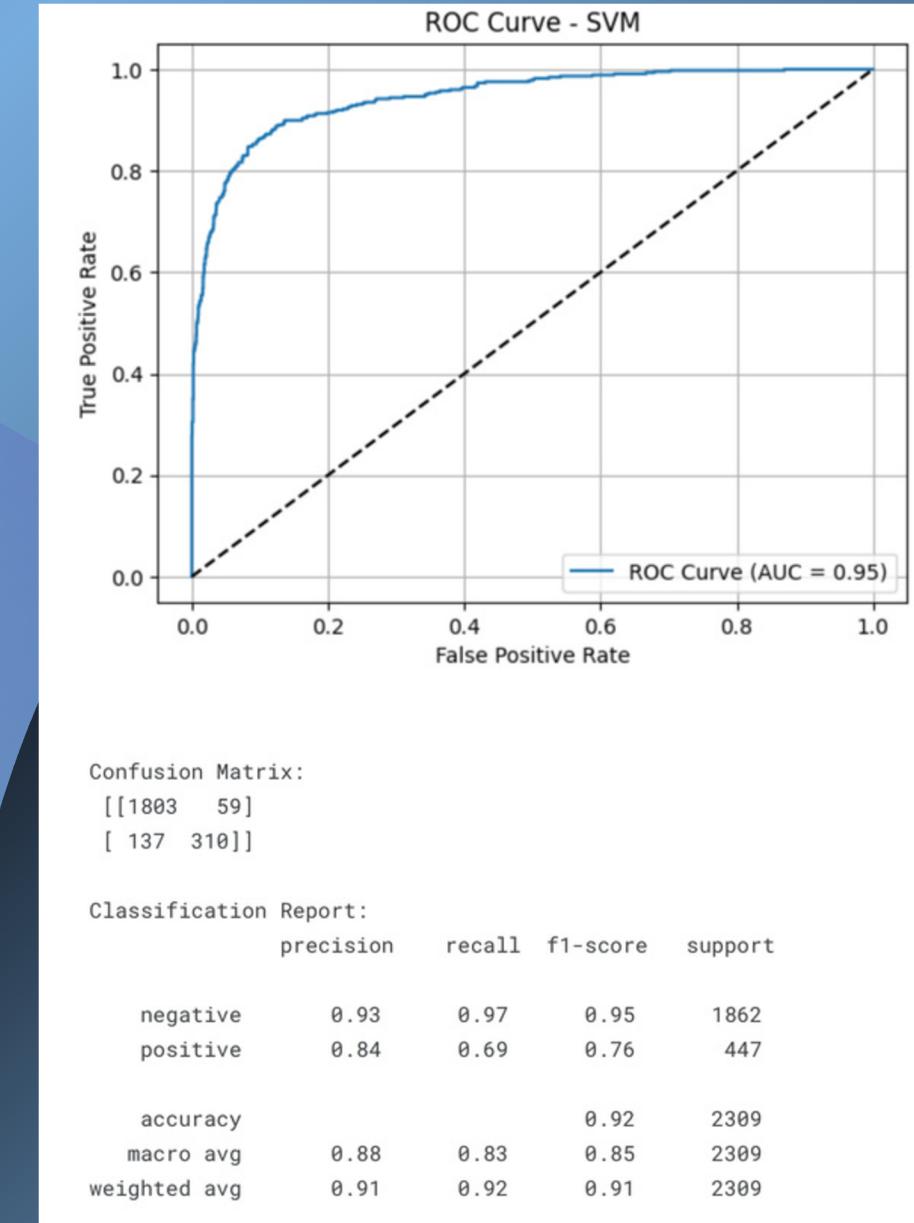
Multiply scores used to rank the importance of words within documents

Experiments and Results

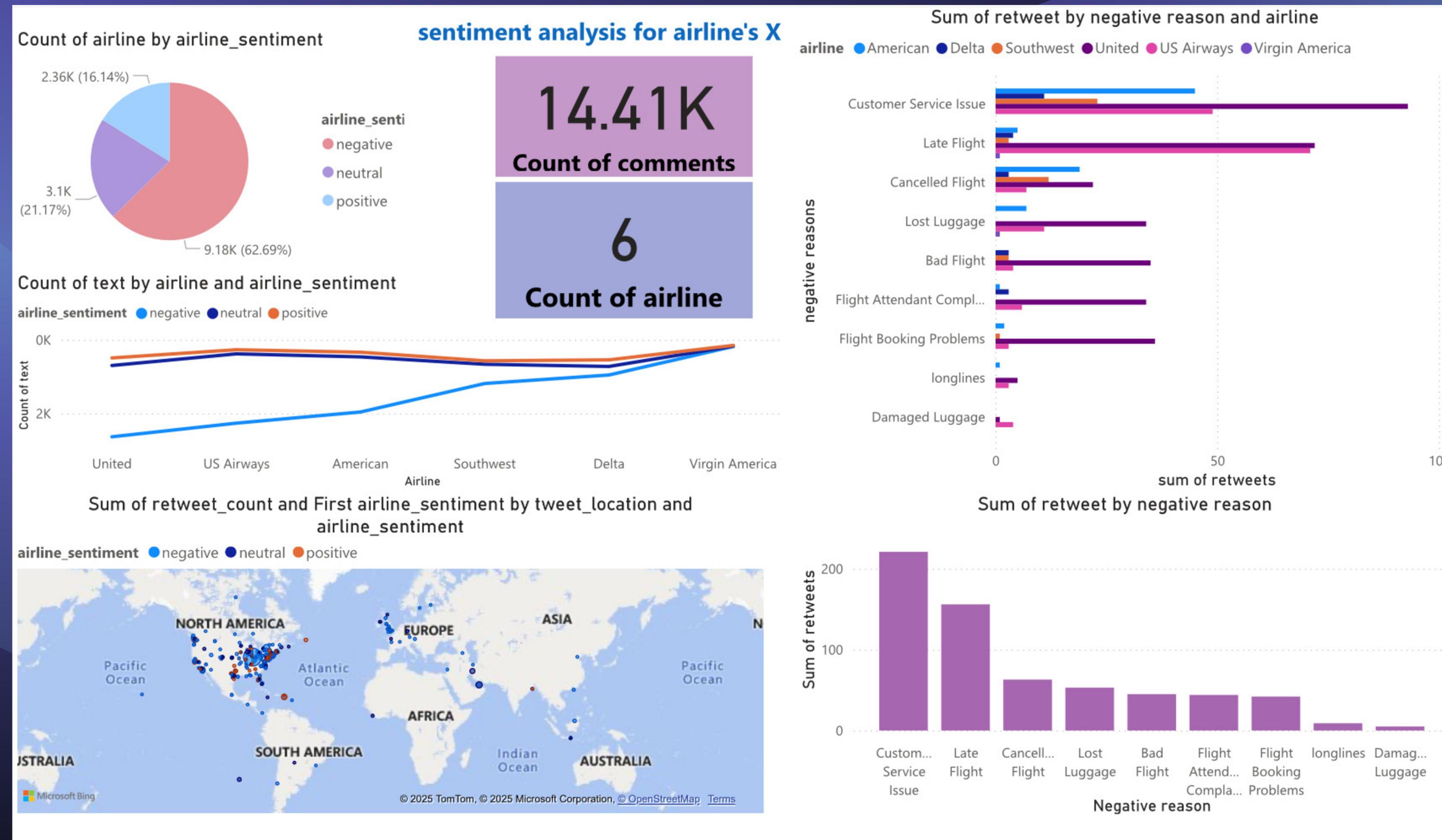
Logistic Regression



Support Vector Machine



Dashboard



Challenges



Motivation

- Improving customer experience
- A real example that most people perceive
- To explore a different variety of opinions in a term using social media data X (previously known as Twitter)

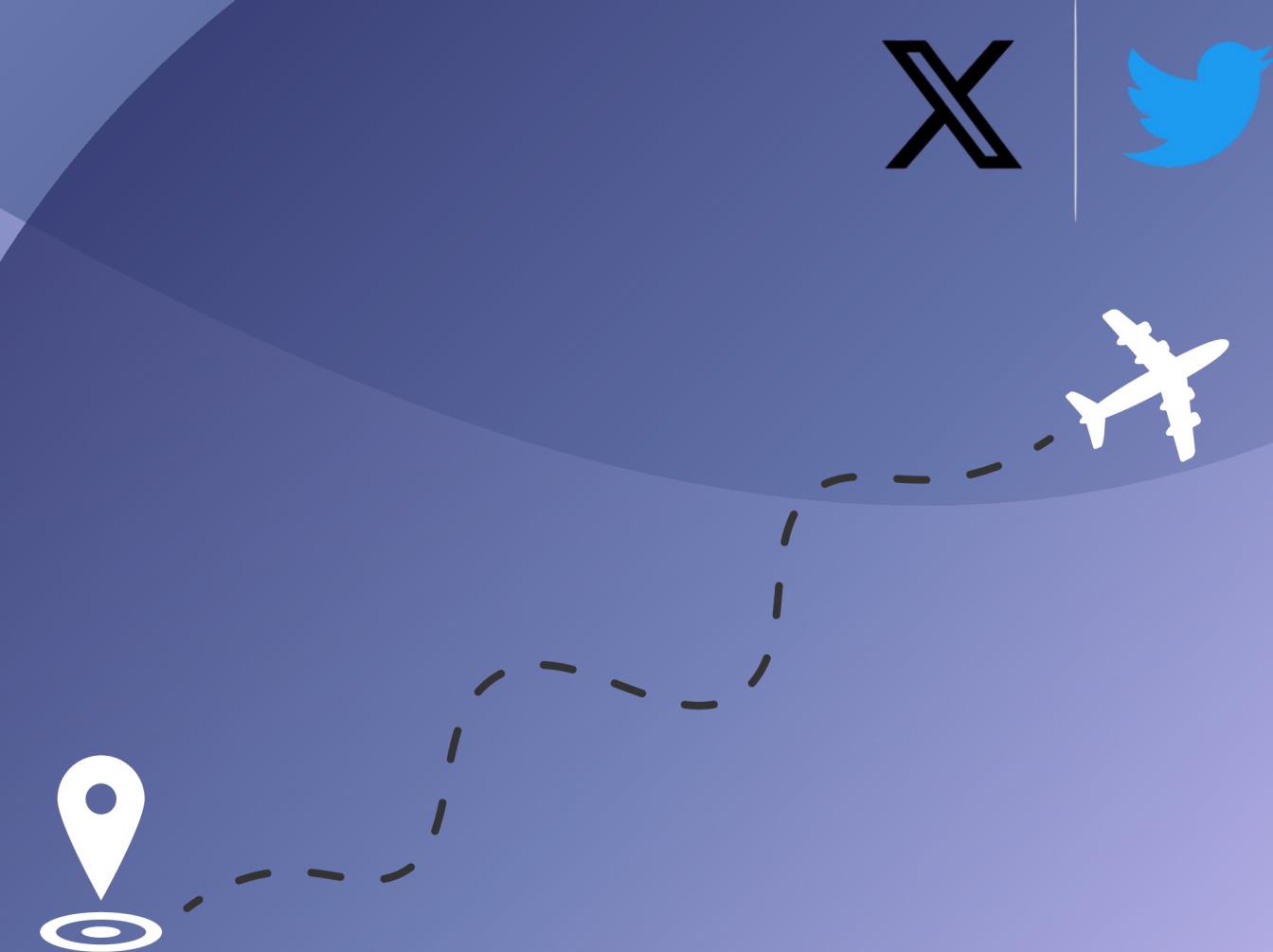
Conclusion and next step



Thank you for listening



Project notebook



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