Air Canada Customer Review Analysis

INSY 669: Text Analytics

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Introduction to the business: Air Canada

Air Canada Overview **AIR CANADA**

Founded in 1937, Largest Domestic and International airline in Canada

Provides services in more than 200 airports on 6 differents continents

Air Canada hubs: Toronto, Vancouver, Montreal, Calgary

Mission & Vision: Connecting Canada and the world through passion and innoation

What insights can we get from customers feedback to improve flights services?

Air Canada
Customer Reviews

|	
Food & Beverages	★★★☆☆
Inflight Entertainment	★★★☆☆
Seat Comfort	★★★☆☆
Staff Service	★★★☆☆
Value for Money	★★☆☆☆

Route: Lift, MDS and Sentiments

Cities Association MDS Plot

International destinations
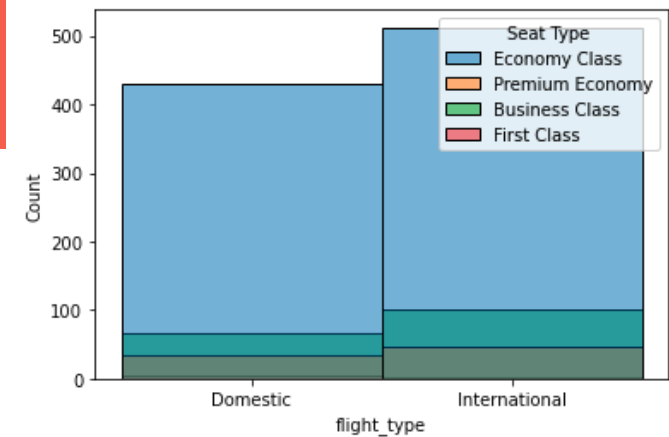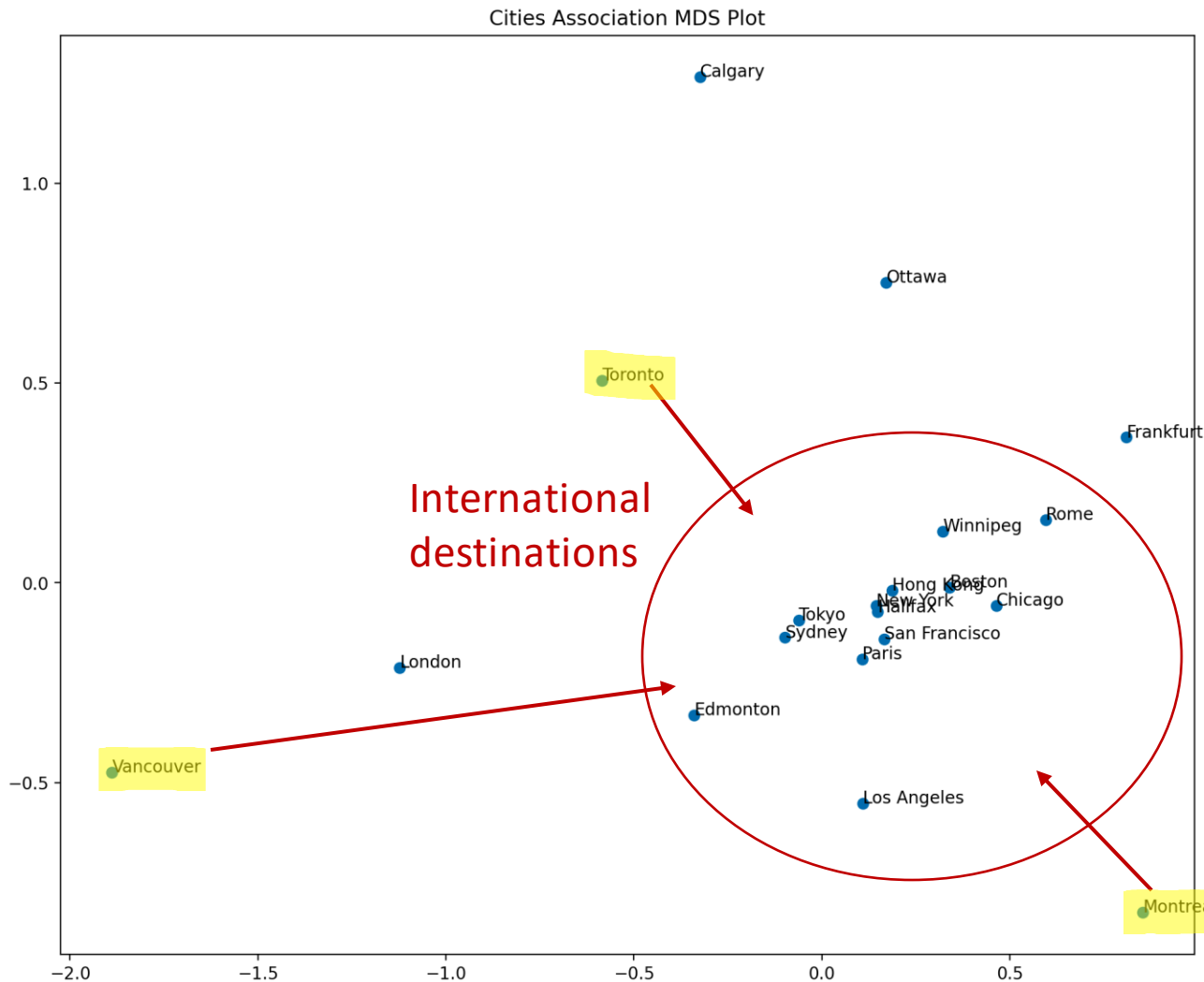
- Top 20 mentioned cities in reviews
- Mix of domestic and international flights
- International routes are more diverse while domestic routes are more saturated
- People are more unsatisfied about direct flights

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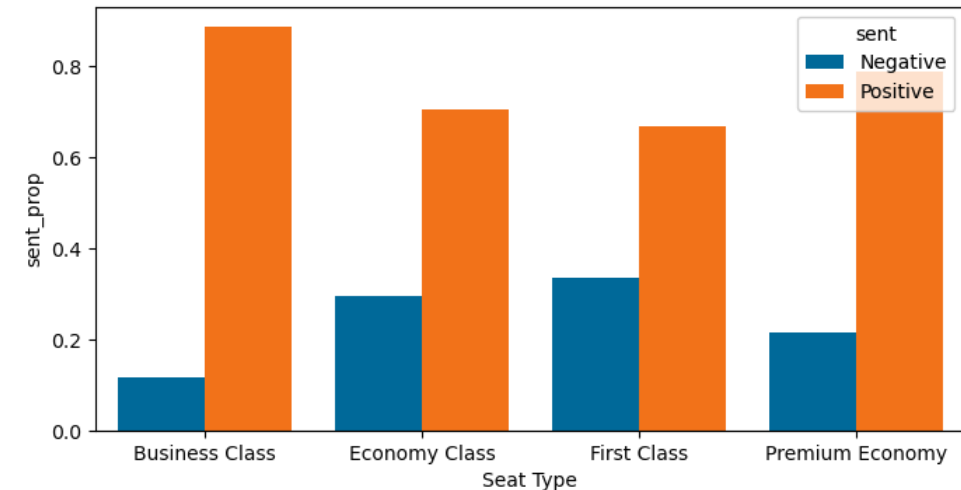
Review Cosine Similarity

- There is no clear identification between positive and negative sentiment based on cosine similarity.
- This might be caused by reviews are concentrated on a few topics; customers reflect to it either in a positive or negative way. (e.g. service, delay)
- This might also be caused by MDS not being the best way visualizing cosine similarity here.

Based on cosine similarity > 0.15, we find the most similar comments from all reviews and find their characteristics.

City	Counts
Toronto	20
Vancouver	8
Montreal	6
Edmonton	3
Las Vegas	2

Comments Similarity MDS Plot

Sentiment Distribution
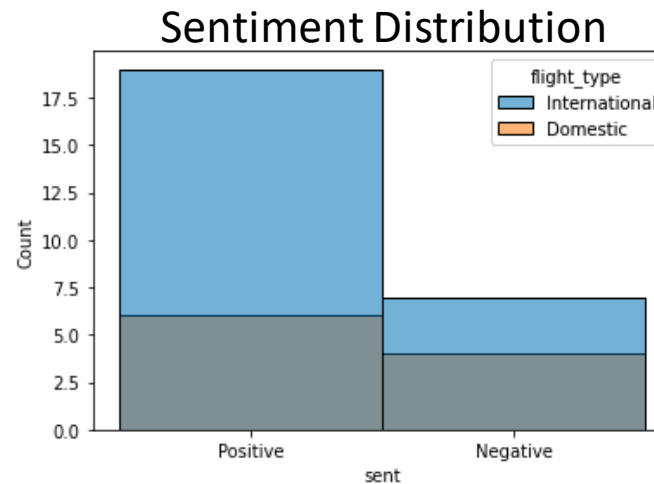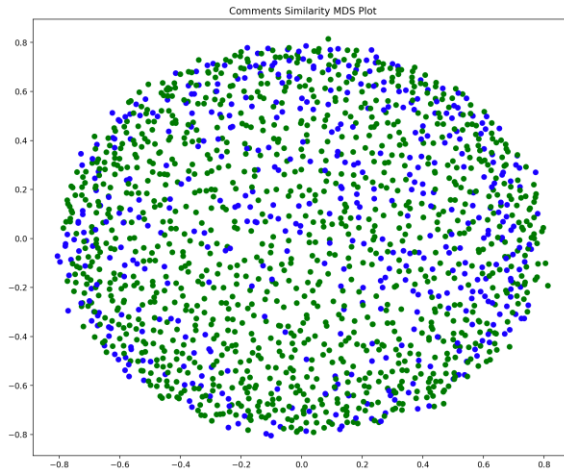
Top 5 mentioned keywords
Customer Service
Line
Hour
Luggage
Time

Word cloud of Reviews' Titles

<u>Topics</u>


```
[(0,
  '0.023*"crew" + 0.018*"cabin" + 0.018*"hours" + 0.015*"good" + '
  '0.012*"disappointed" + 0.011*"friendly" + 0.010*"food" + 0.008*"delayed" + '
  '0.008*"luggage" + 0.008*"get"'),
 (1,
  '0.039*"experience" + 0.025*"good" + 0.021*"staff" + 0.013*"attendants" + '
  '0.011*"pleasant" + 0.011*"seats" + 0.010*"luggage" + 0.010*"comfortable" + '
  '0.009*"never" + 0.009*"overall"'),
 (2,
  '0.026*"delayed" + 0.018*"seat" + 0.018*"cancelled" + 0.014*"airline" + '
  '0.014*"uncomfortable" + 0.013*"time" + 0.010*"flights" + 0.010*"hour" + '
  '0.010*"extremely" + 0.010*"helpful"'),
 (3,
  '0.026*"worst" + 0.020*"experience" + 0.018*"terrible" + 0.018*"airline" + '
  '0.016*"staff" + 0.016*"excellent" + 0.015*"food" + 0.013*"class" + '
  '0.011*"poor" + 0.011*"good"')]
```

Sentiment Analysis

Reviews (Avg. Ratings)		Reviews (Sentiment assgn)		Combining Reviews & Title	
Top Positive	Top Negative	Top Positive	Top Negative	Top Positive	Top Negative
Seat	Hour	Seat	Hour	Seat	Hour
Service	Seat	Service	Seat	Service	Service
Good	Time	Time	Service	Time	Seat
Time	Service	Hour	Time	Hour	Time
Food	Plane	Good	Plane	Good	Customer
Crew	Told	Food	Staff	Food	Plane
AC	Customer	Plane	Customer	Plane	Staff
Staff	Day	AC	Airport	Staff	Food
Cabin	Airport	Staff	Food	AC	Airport
Class	Staff	Crew	Passenger	Crew	Passenger

Insights from Analysis

Services provided

- Services: Economy/Premium options, Onboard meals, In-flight Entertainment, Wi-fi, Duty free outlets, Lounges and Concierge services, preferred seats,

- Highly professional crews/ ground staff

- Serves majority of domestic routes compared with international routes

Insights from reviews

- Positive reviews showed customer satisfaction on seats, services(on board/ground), cabins and time.

- Negative reviews were mainly on delay/cancellations which led to poor services (inflight/off-flight)

- Overall, inflight services (food, wi-fi, entertainment systems and seat comfort) were good.

- However, on punctuality, staff service and on value for money there seems to be need for improvement

Recommendations

- Pricing can me made competitive especially for economy/business class category to improve occupancy

- Seats in economy/premium eco can be improved for long- haul flights for better comfort

- Route specific food option can make economy/premium segment more satisfactory and give an edge over competitors

- Punctuality and low cancellation should be the focus (have buffer time and less contact points during flight to maintain on time performance)

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Thank you!

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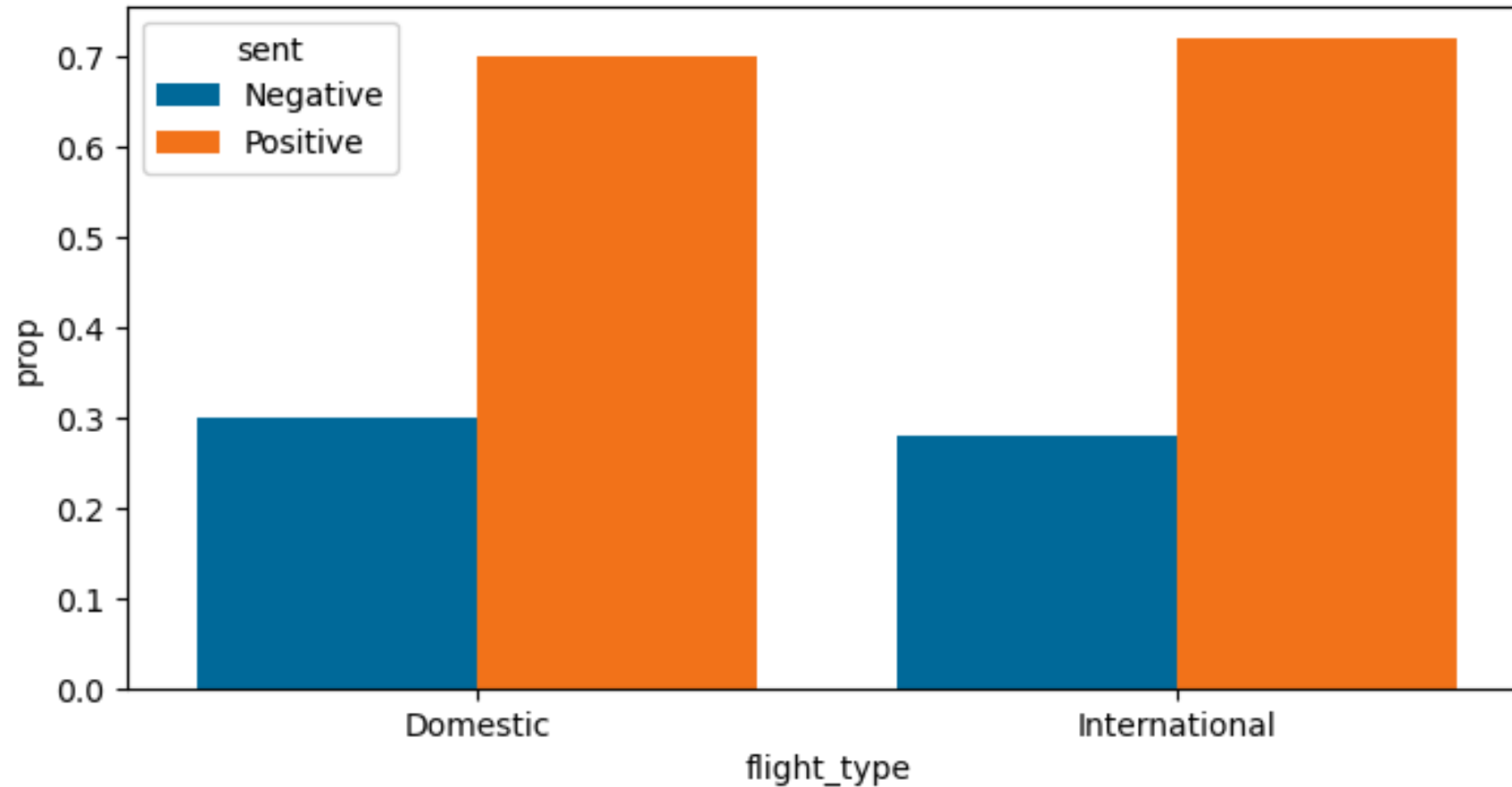
Appendix 2: Transfer/Direct flight Sentiment Impact

Flight	Sentiment	Counts	Proportion
Direct flight	+	359	0.29
	-	876	0.71
Transferred flight	+	108	0.26
	-	305	0.73

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