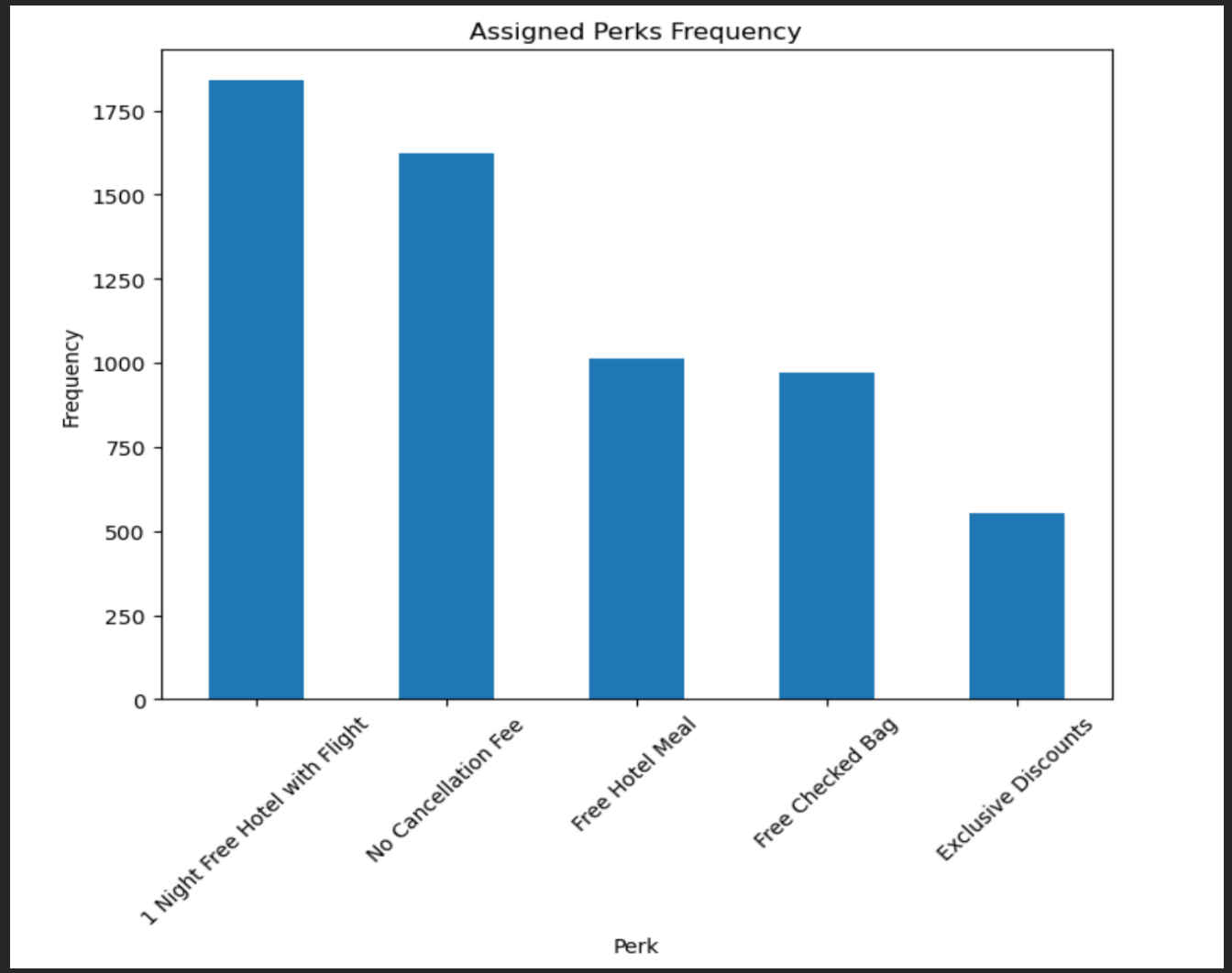
Optimizing TravelTide Platform through Customer Segmentation

Introduction:

Context:
Online travel booking platform.

Goal:
Segment customers based on demographics, behavior, and perk preferences.



Perk-Based Segmentation

Segments:

1) 1Night Free Hotel and flight
2) Exclusive Discounts
3) Free Hotel Meal
4) Free Checked Bag
5) No Cancellation Fee

(we considered 1 Night Free Hotel and Flight as the most popular perk.)

Conditions:

for example :
For first segment, Hotel Booked (Aggregation Column) and Flight Booked (Aggregation Column) should be 1 or more. And Total purchase for that customer should be more than the mean of the total purchase metric.

(You can refer to the Python code for details on all conditions.

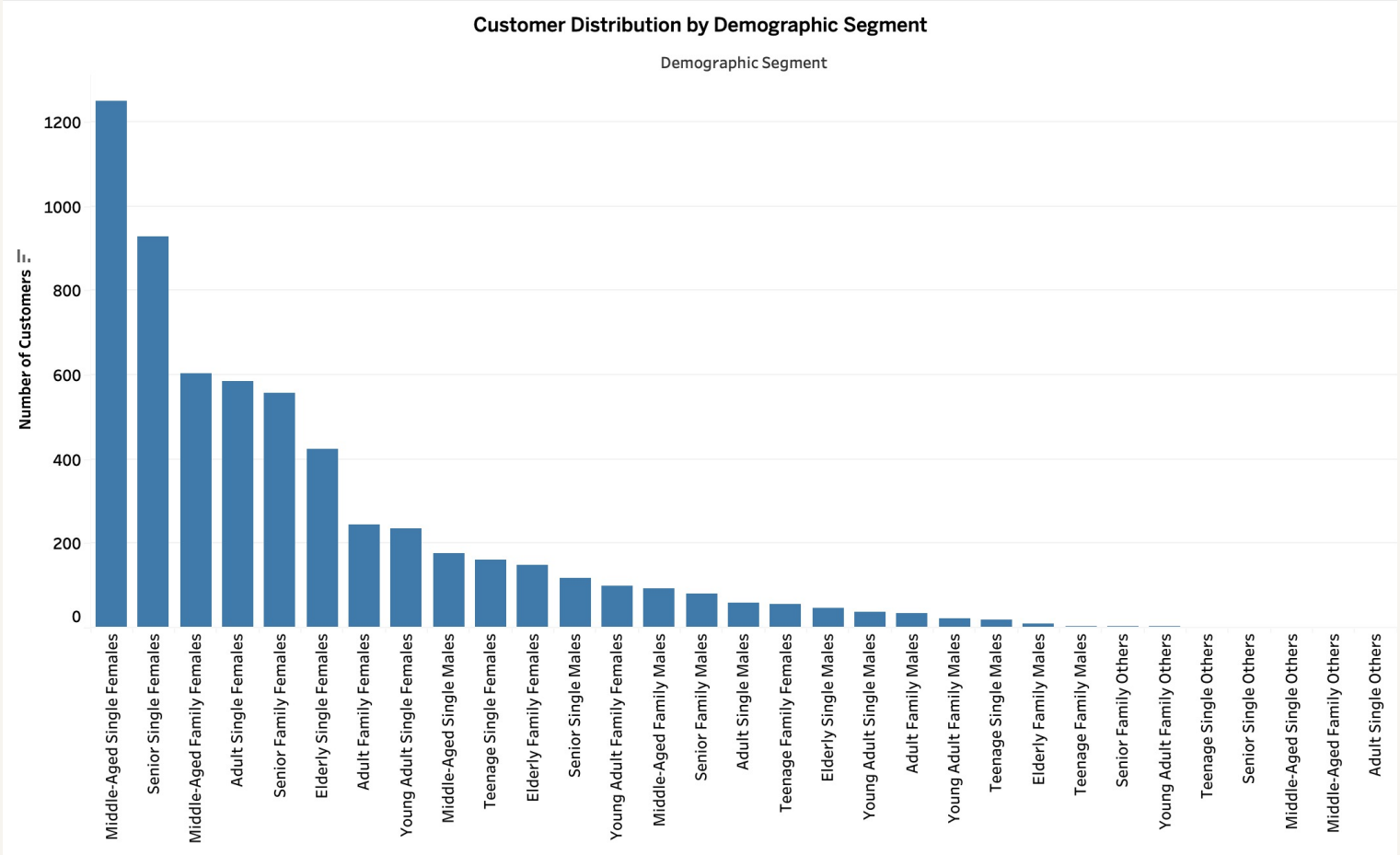
Demographic Segmentation

Segments:

Teenage Single Males
Young Adult Family Females,
Senior Single Females, etc.

Based on:

1) Age group
2) Gender
3) Children Status

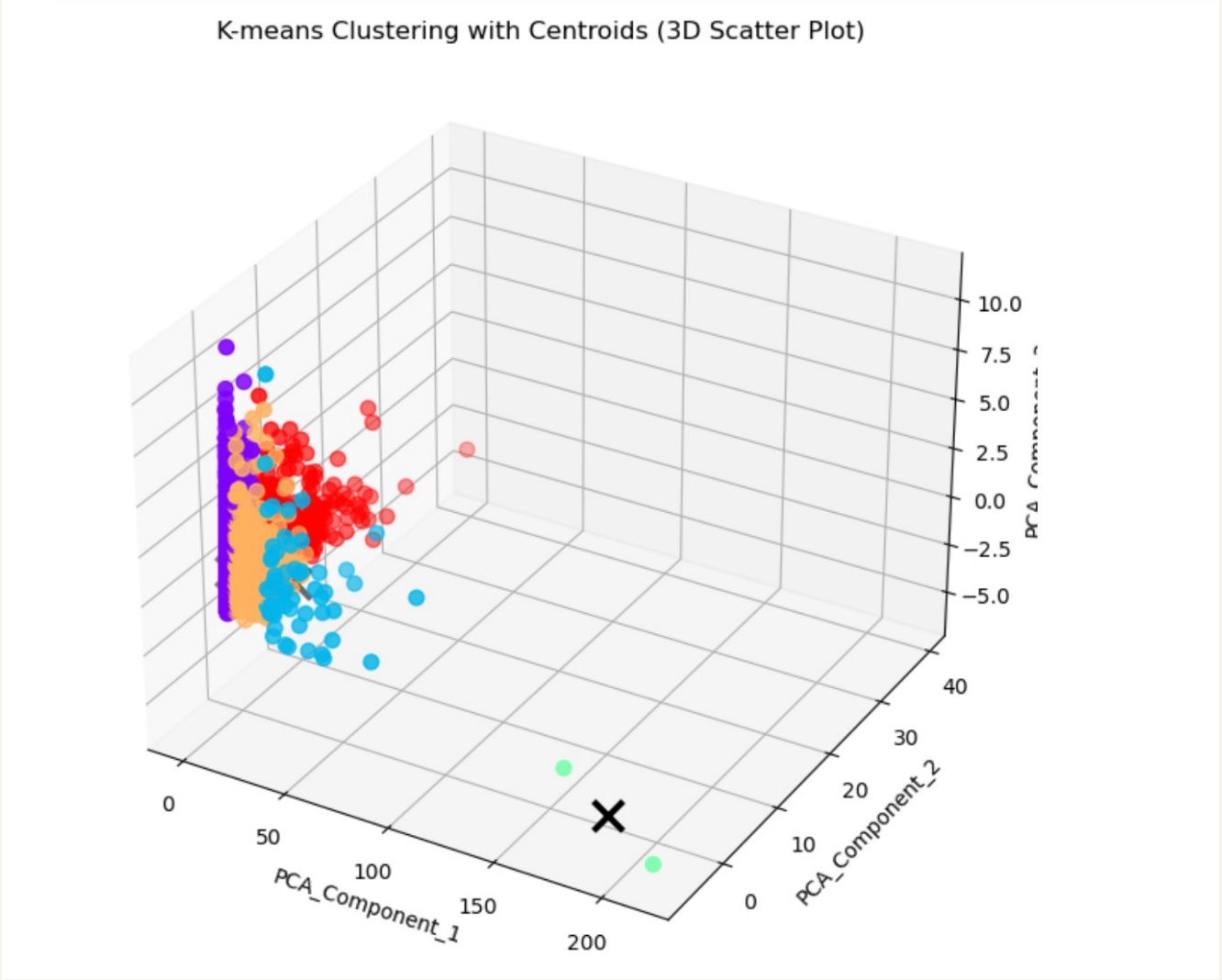


K-means Clustering

Approach:
K-means Clustering

n_component = 3
n_cluster = 5

Result:
Visual Clustering of Customer Behavior



Key Insights

Insight 1:
Overlap in "1 Night Free Hotel" and "Exclusive Discounts”

Insight 2:
Diverse Preferences in "No Cancellation Fee”

More Insights:
- Engagement Impact
- Demographic Differences
- Behavioral Insights

Conclusion

- **Success:** Effective Customer Segmentation

- **Benefit:** Revenue Growth and Enhanced User Experience

*For a detailed visual representation and interactive exploration of our segmentation analysis, please access the Tableau dashboard here.

*Here is the link to the video presentation: here