TSA Complaints

A White Paper Presented to Amirfarrokh Iranitalab

For Bellevue Class DSC 680

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TSA Complaints have grown dramatically in recent years, particularly compared to before COVID. We now see some airports with over double the airport with the most complaints in previous years. A lot of this has to do with the rise of prescreening – many more people have signed up and many new complaints have followed. “Total enrollments have surged by around 800%, from less than 2 million at the end of 2015 to 18 million at the end of 2023”[[1]](#endnote-1) But breaking down the complaints by category reveals that even ignoring the increase of complaints of expediated passenger screening programs, complaints are still on the rise.

For this project, I used Power BI to do my analysis of the data and created a pbix file containing all the processed data and charts on this report. I got most of the data from Bellevue Data Science class 640. [[2]](#endnote-2) There were multiple csv files that I needed to join to look at the data properly. Many of the columns were unnecessary for my projects so they were dropped. I had to do a lot of aggregation work to present the graphs in this report. Below is a boxplot showing the number of complaints in recent years.

A screenshot of a graph

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Summing up the complaints for all the years between 2015 and 2023, we get the bar chart below showing which airports have the worst performance. This is looking only at the worst twenty airports.

A blue and white graph

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We can visualize this another way by showing a map of the United States with the most complaints as a geographic bubble chart and, breaking it down by category, we can also show a heatmap of how the number and type complaints vary by airport.

A map with blue circles

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The heatmap reveals that Expedited Passenger Screening Program shows that is by the category with the most complaints followed by Mishandling of Passenger Property. Los Angeles International Airport comes out as the airport with the most complaints only slightly above Newark Liberty International Airport. To display this data using bar charts while looking just at LAX, we can see the two charts below breaking down the complaints by category and subcategory. The next step in this whitepaper will be to do predictive modeling.

A screenshot of a computer

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A screen shot of a computer

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I intend the audience for this paper and the presentation based on this paper to be Los Angeles International Airport as they have had the most complaints over the years of this data and they have the highest number of complaints in several categories. For my application and recommendation, I would encourage LAX to look at the categories that they have the highest number of complaints in and focus on reducing those complaints first. By learning what the other airports are doing in these categories, it might mean that these areas are low hanging fruit compared to the other categories.

As for ethical considerations, there were not any obvious concerns. The data was collected by the government and is publicly available. It only consists of aggregates that, on the lowest level, by airport and category. This means there is no personally identifiable information. I decided to look at only the top twenty airports with the most complaints, so I might be missing interesting findings on airports further down the list that have a high number of complaints in a particular area.

Questions:

1. Is an airport lost and found different than a normal lost and found?
2. What Expedited Passenger Screening Programs are there?
3. Why has TSA PreCheck become so popular?
4. What role did COVID play in complaints?
5. What are Civil Right complaints about?
6. What airports have the lowest number of complaints?
7. Since 2023, have complaints gone up or down?
8. How many airports were in the datasets?
9. Why does Newark Airport have so many complaints?
10. How many passengers does LAX handle compared to other airports?

1. Heilweil, R. (2024, March 22). *As TSA PreCheck enrollments surge, data shows complaints have followed*. FedScoop. https://fedscoop.com/tsa-precheck-complaints-data/ [↑](#endnote-ref-1)
2. <https://content.bellevue.edu/cst/dsc/640/2024Update/Datasets/iata-icao.csv>,

   <https://content.bellevue.edu/cst/dsc/640/2024Update/Datasets/complaints-by-airport.csv>

   <https://content.bellevue.edu/cst/dsc/640/2024Update/Datasets/complaints-by-category.csv>,

   <https://content.bellevue.edu/cst/dsc/640/2024Update/Datasets/complaints-by-subcategory.csv>, [↑](#endnote-ref-2)