

TSA Complaints

Analyzing TSA Complaints Data: A Story-Driven Approach

Audience:

For this analysis, the audience consists of TSA executives and stakeholders who have an intermediate understanding of the data but are not deeply familiar with specific complaint trends or detailed information. This audience primarily focuses on decision-making and policy adjustments, requiring a high-level overview and occasional deep dives into significant trends. Given their role, the presentation should balance data insights with actionable implications, avoiding overly technical jargon to ensure clarity and adequate accessibility.

Purpose:

This presentation aims to promote better customer service processes at select airports with high complaints, identify the categories that need immediate attention, and propose actionable recommendations. By the end of the presentation, the objective is for the TSA executives to recognize patterns in complaint data, understand the areas with the most urgent needs, and consider implementing specific process changes or resource allocations to address these issues. The call to action suggests pilot programs to reduce complaints in high-frequency categories and airports, supported by data-driven insights.

Medium

A PowerPoint presentation is chosen as the most effective medium. This format allows for a structured flow of information, combining visuals and essential insights to guide the audience through the narrative logically. Each slide will display distinct analysis sections leading up to the final recommendations. This format ensures that TSA executives can quickly understand high-level insights while providing the flexibility to explore individual visualizations further exploration.

Design Choices (Gestalt Principles):

The design follows Gestalt principles to enhance the presentation's visual coherence and accessibility:

- **Color:** To build trust and familiarity, a consistent color palette featuring TSA branding colors (like blue and gray) will be applied. High contrast will emphasize critical information, and complaint categories will be color-coded to enable quick comparisons.
- **Text:** Brief text will emphasize concise, impactful statements and data points. Important insights will be displayed in a larger font, capturing immediate attention.
- **Alignment and Sizing:** Alignment will adhere to a structured grid layout, ensuring information flows naturally from left to right and top to bottom. More prominent visuals will take central positions on the slides to highlight key insights.

- **Spacing:** Ample spacing between elements ensures clarity, prevents visual overload, and makes each section easy to digest.

Visualization

The presentation includes six visualizations, three of which are:

- **Heat Map:** This illustrates the frequency of complaints by airport and month, enabling quick identification of peak complaint periods.
- **Custom Visual:** An overview of complaint categories at airports that offers insight into the common types of complaints encountered at each location.
- **Spatial/Choropleth Map:** This map illustrates airports with the highest complaint counts to highlight geographic patterns and areas of concern.

Ethical Considerations

- **Data Transformation:** Complaint counts were compiled by airport and category. Any missing values were addressed by imputing average complaint values to prevent skewed trends from the absence of data.
- **Regulatory Compliance:** Complaint data is anonymized and does not include personally identifiable information, ensuring compliance with privacy regulations. The data adheres to TSA guidelines for public reporting, with no sensitive security information disclosed.
- **Potential Risks:** By highlighting specific airports, there is a risk of damaging the reputations of those locations. The data presentation will emphasize actionable improvement areas instead of criticism to reduce this.
- **Assumptions:** It was assumed that complaint counts accurately reflect customer dissatisfaction levels. However, the analysis acknowledged this assumption, noting that external factors, such as flight delays beyond TSA control, may influence some complaints.
- **Data Credibility:** Data was sourced from verified TSA records and cross-checked for accuracy. Any possible data manipulation or filtering was clearly documented in the presentation, ensuring complete transparency of analytical methods.

In summary, this analysis is designed for TSA executives to offer a clear understanding of complaint trends across various airports and categories. The aim is to promote actionable insights that enhance customer service processes. Design and ethical considerations were considered to ensure clarity, accessibility, and responsible data handling, laying the groundwork for informed decision-making and potential operational improvements.