IT Analytics Dashboard: Monitoring and Managing Support Tickets

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Introduction to the Case Study

This case study focuses on analyzing support ticket data to improve customer service operations and enhance user satisfaction. The dataset encompasses detailed information on support tickets, including their volume, types, response and resolution times, SLA compliance, escalation rates, and customer feedback. By leveraging data analysis, the study aims to identify trends, inefficiencies, and areas for improvement in the support process.

Objectives of the Case Study
- Analyze the total volume of support tickets received over a specified period.
- Evaluate average response and resolution times to identify efficiency gaps.
- Measure SLA compliance rates to ensure timely ticket resolution.
- Categorize common types of issues reported to prioritize improvements.
- Assess user satisfaction ratings and feedback to enhance service quality.

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Problem Statements

1. Show Number of tickets by status(Open, Pending and Closed) for a selected period using a 100% Stacked Bar Chart?

2. Show the percentage change in the number of issue tickets by issue category.

3. What is the average response time for support tickets by department?

4. Display the number of tickets resolved within SLA timeframes by month for a selected period using a column chart.

5. Add a dynamic title to the chart in Question 4 to display the total number of closed tickets.

6. Identify the support agents handling the most tickets and their resolution rates, with a dynamic filter for year selection.?

7. Determine the percentage of tickets escalated to higher support levels.

8. Show a frequency distribution of user satisfaction feedback using a histogram.

9. Calculate the number of tickets that remain unresolved or are pending for an extended period.

10. Create a dynamic dashboard incorporating all the above insights.

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Dataset Description

Column Name	Description
TicketID	Unique identifier assigned to each support ticket.
DateReceived	The date on which the support ticket was received.
ResponseTime	Time taken to respond to the support ticket after it was received.
ResolutionTime	Time taken to fully resolve the support ticket.
SLAStatus	Indicates whether the ticket resolution met the Service Level Agreement (SLA).
IssueCategory	The category or type of issue reported in the ticket (e.g., technical, billing).
ReceivedTimeOfDay	The time of day when the ticket was received (e.g., morning, afternoon).
AssignedAgent	The support agent to whom the ticket was assigned for resolution.
Escalated	Indicates if the ticket was escalated to a higher support level.
UserSatisfaction	Feedback or satisfaction rating provided by the user after ticket resolution.
Status	The current state of the ticket (e.g., Open, Resolved, Pending).

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Data Visualization Guidelines

All elements need to be unified in terms of the font type, font size, color and position.

Element	Font Type	Font Size	Color	Position
Chart Title	Segoe UI	14, Bold	Blue Gray	At the top of the chart
Y-axis Title	Segoe UI	10, Bold	Blue Gray	On the left of the y-axis labels (EN)
X-axis Title	Segoe UI	10, Bold	Blue Gray	Below the x-axis labels
Axis Labels	Segoe UI	9	Blue Gray	On the axis
Data Label	Segoe UI	9	Blue Gray	At the center of the variable plot area
Legend	Segoe UI	9	Blue Gray	At the bottom of the chart

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Data Visualization Color Guidelines

The featuring a mix of violet-blue, sail blue, and tonys pink on a clean white background. The shades of blue evoke an inspiring feel, while the tonys pink adds a lively and energetic mood.
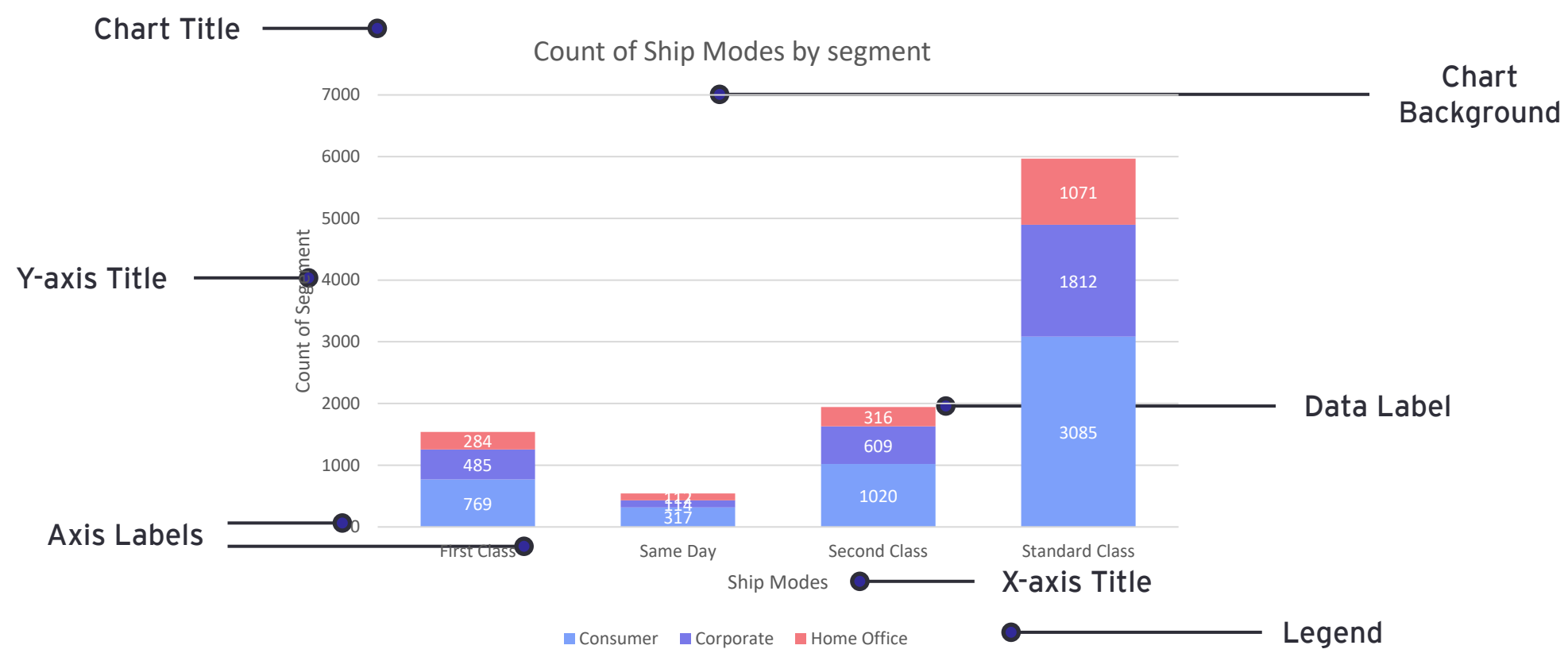
Primary Colors

6F42C1	007BFF

Supporting Colors

00CCCC	0DCF0	17A2BB

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Data Visualization Guidelines

There should be essential elements in most of the chart types that require some uniformity to ensure consistency across all charts.

Chart Title

Count of Ship Modes by segment

Chart Background

Y-axis Title

Data Label

Axis Labels

X-axis Title

Legend

■ Consumer ■ Corporate ■ Home Office

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Thank you

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