Executive Summary: Business Intelligence Capstone, Google Fiber

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Introduction

The final capstone of Coursera's Google Business Intelligence Certificate requires a deep dive into a business case scenario. Google Fiber provides people and businesses with fiber optic internet. The project centers on analyzing the call center, a crucial aspect of Google Fiber's business operations. Its aim is to construct a dashboard geared towards improving customer satisfaction and operational efficiency by uncovering patterns in repeat caller behavior.

Objective

The objective is to provide stakeholders with actionable data regarding the frequency of repeat calls, the types of issues prompting multiple inquiries, and regional variations across Google Fiber's market cities.

- Frequency Analysis: Understand the frequency with which customers contact customer support after their initial inquiry, indicating the effectiveness of resolving queries on the first interaction.
- Issue Identification: Provide insights into the types of customer issues that lead to repeat calls, enabling targeted improvements in service quality and problem resolution.
- Regional Trends: Explore repeat caller patterns across Google Fiber's three different market cities, identifying geographic variations in customer behavior and support needs.
- Temporal Analysis: Design charts and visualizations that allow stakeholders to analyze repeat caller trends on weekly, monthly, quarterly, and yearly bases, facilitating a nuanced understanding of temporal fluctuations and long-term patterns.

Methodology

Three data sets were obtained pertaining to different markets. These datasets contained information regarding problem types, date of first inquiry, days after initial inquiry, and more. The datasets were scrubbed through Google's BigQuery via SQL and loaded into Tableau for visual representation.

Several stakeholder questions were considered when configuring the right representations of the data through visualization.

Success for this project will be measured by a reduction in call volume driven by increased customer satisfaction and operational optimization. The dashboard will serve as a critical tool for stakeholders to monitor and assess progress towards this overarching goal. It will provide a holistic view of repeat caller volumes, highlight prevalent issues, and offer insights into the effectiveness of interventions aimed at enhancing the customer experience.

Findings

In the findings section, it was observed that Day 1 repeat calls consistently exhibited the highest volume across all markets, while Day 7 repeat calls consistently showed the lowest volume. Market 1 emerged with the highest overall volume of repeat calls, contrasting with Market 2, which recorded the lowest. Additionally, March demonstrated higher rates of repeat calls across all markets. Analysis of initial calls across all markets revealed that technician troubleshooting and internet & WIFI-related issues were the most prevalent problem types. Conversely, construction-related concerns recorded the lowest call volumes universally.

Recommendations

Based on the findings, several recommendations can be made to improve the call center's operations:

1. **Day 1 Focus**: Since Day 1 repeat calls consistently have the highest volume, efforts to address issues comprehensively during the initial interaction must be prioritized. Implement refreshed troubleshooting protocols and empower frontline staff with adequate resources to resolve customer queries effectively on the first call.
2. **Post-Day 7 Engagement**: Given the low volume of Day 7 repeat calls, consider strategies to maintain customer engagement beyond the first week of interaction. Implement proactive outreach programs, such as follow-up calls or emails, to ensure customer satisfaction and address any lingering concerns.
3. **Market-Specific Strategies**: Tailor support strategies to address the unique needs of each market. Allocate resources and training based on the volume and nature of

repeat calls in each market to optimize customer support efficiency and effectiveness.

4. **Seasonal Variation Awareness**: Recognize the higher rates of repeat calls observed in March and prepare the call center accordingly. Anticipate increased customer inquiries during this period and bolster staffing levels, training, and resources to manage the heightened demand effectively.

5. **Focus on Common Issues**: Given that technician troubleshooting and internet/WIFI-related issues are prevalent across all markets, prioritize training and resources to equip staff with the necessary expertise to address these issues efficiently. Consider implementing proactive measures, such as self-help resources or troubleshooting guides, to empower customers to resolve common issues independently.

By implementing these recommendations, the call center can enhance customer satisfaction, reduce repeat call volumes, and improve operational efficiency.

Wrap Up

Through leveraging business intelligence to uncover actionable insights from customer support data, Google Fiber is poised to proactively address customer concerns, optimize resources, and deliver a seamless service experience across its markets.