DATA ANALYST: SQL PORTFOLIO

PREPARED BY

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Professional Background

Introduction

I am enthusiastic about kickstarting my professional journey and leveraging my educational foundation to contribute to this dynamic field. I am zealous about embarking on continuous learning and professional growth. My academic background passion for computer science and statistics and determination to succeed drive my aspirations in this evolving landscape. With determination to learn and adapt, I hope to bridge the digital divide by providing valuable and efficient insights to businesses and firms.

Career Timeline

1. **Freelance Virtual Assistant,(Data Entry and Internet Research) Upwork - May, 2021 - June 2023**

- Accurately transcribed and inputted data into spreadsheets, databases, and CRM systems.
- Conducted data cleansing and verification to ensure data integrity and accuracy.
- Conducted in-depth internet research to gather information on various topics, industries, and competitors.
- Compiled research findings into detailed reports, summaries, or presentations
- Customer Satisfaction was always at its peak, with regular tips from clients

Education and Training

- **Odorgonno Senior High School, General Science**

- National Science and Math Team Assistant Captain and Contestant
- Robotics Club Member

- **Data Analyst Level 1 Entry-Level Programs Certification**

- Obtained data virtualisation, data wrangling, report writing and storytelling skills.
- Analyzed Udemy course data and made recommendation to boost sales of courses

Core Skills

- **Technical -** Python, SQL, Tableau
- **Soft Skills -** Teamwork, Communication, Emotional Intelligence

Career Goal

My career goal is to become a proficient data analyst specializing in predictive analytics, I aim to leverage my strong foundation in data manipulation, statistical analysis, and programming to provide data-driven insights that empower organizations to make informed decisions and drive sustainable growth. a proficient data analyst

Portfolio Outline

Introduction

Abstract

In this portfolio, I present a comprehensive case study that delves into data analytics, focusing on donor insights and donation rates for a charitable organization, Education for All. The primary objective was to analyze the available datasets—EFO_Donation_Data and EFO_Donor_Data—to gain insights that could inform the fundraising strategy of the organization and ultimately increase the number of donors, donation frequency, and donation value.

Situation: The context for this project revolves around the need for Education for All to enhance its fundraising efforts. The organization seeks to increase donor engagement, improve donation rates, and secure additional financial support to further its mission.

Task: The primary task of this report was to extract meaningful insights from the provided datasets to address key objectives within the EFO's fundraising strategy. These objectives include increasing the number of donors, donation frequency, and maximizing the value of donations.

Action: To accomplish these objectives, a series of data analysis techniques and methodologies were employed. These included data cleaning, exploratory data analysis (EDA), data visualization, SQL queries, and statistical analysis. By leveraging these methods, the report aimed to uncover trends, patterns, and actionable insights within the donor data.

Result: The data analysis revealed valuable insights into donor behavior and preferences. Key findings included trends in donation frequency, geographical distribution of donors, and the impact of different variables on donation rates. These insights serve as a foundation for Education for All to tailor its fundraising strategies, target specific donor segments, and optimize engagement efforts. organizational decision-making.

Root Cause Analysis

Root Cause Analysis (RCA) is a problem-solving technique used to identify the underlying or fundamental causes of a particular issue or problem rather than just addressing its symptoms. It is called the Five Why analysis because it involves asking "Why" five times in order to get to the root of the problem. Given our project for example take a look at the five why's:

Problem: Decreased donor engagement and declining donation rates.

- **1st Why**: Why is there decreased donor engagement and declining donation rates?

Because the number of new donors has decreased.

- **2nd Why**: Why has the number of new donors decreased?

Because the marketing campaigns targeting potential donors have become less effective.

- **3rd Why**: Why have the marketing campaigns become less effective?

Because the messaging and content in the campaigns are not resonating with the target audience.

- **4th Why**: Why is the messaging and content not resonating with the audience?

Because the organization hasn't conducted a thorough analysis of donor preferences and interests.

- **5th Why**: Why hasn't the organization conducted a thorough analysis of donor preferences and interests?

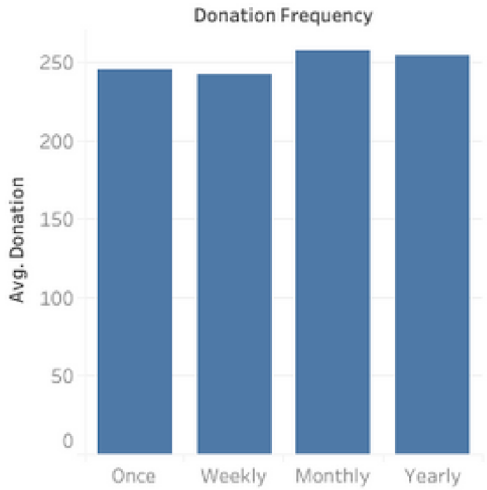
Because there hasn't been a systematic data analysis of donor data to understand their behaviors and preferences.

Root Cause: The root cause of the decreased donor engagement and declining donation rates is the lack of systematic data analysis to understand donor behaviors and preferences, leading to ineffective marketing campaigns.

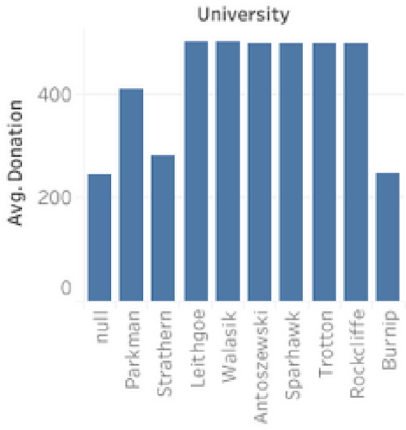
Insights

Education For All Fundraising Analyzer

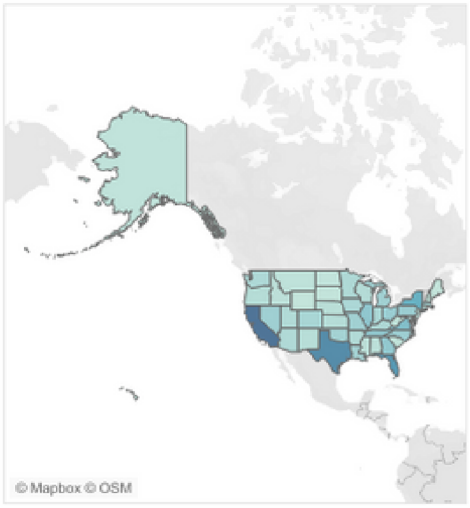
Average donation by donor frequency



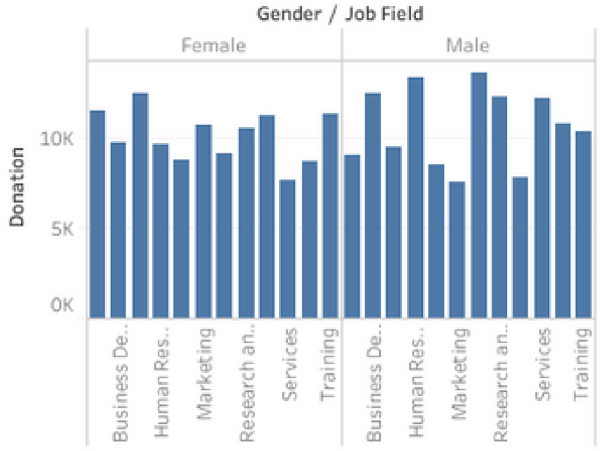
Top 10 Average donation by donor universities attended



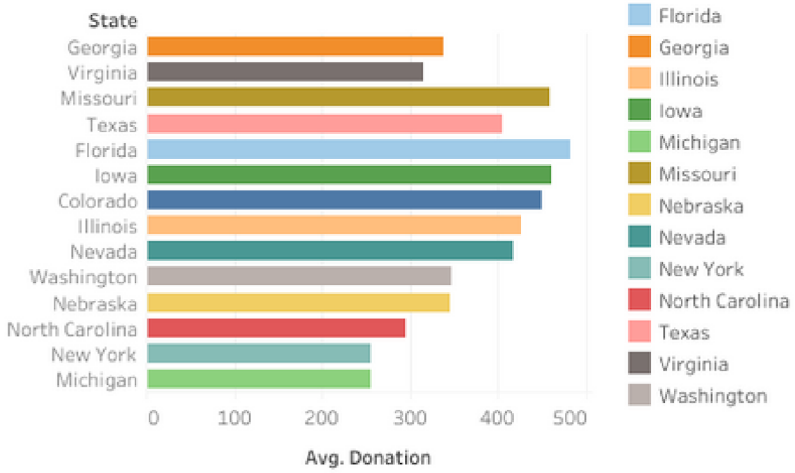
Donors by states



Average donation by gender/job field



Top 10 average donations by states



Insights

SQL Queries Used

1.
```
SELECT
    D.donation_frequency,
    AVG(DT.donation) AS average_donation
FROM
    Donor_Data2 AS D
JOIN
    Donation_Data AS DT
ON
    D.id = DT.id
WHERE
    D.donation_frequency IN ('Once', 'Weekly', 'Monthly', 'Yearly')
GROUP BY
    D.donation_frequency;
```

2.
```
SELECT state,donation
FROM Donation_Data
```

3.
```
SELECT gender,job_field,donation
FROM Donation_Data
GROUP BY gender,job_field;
```

4.
```
SELECT Donor_Data2.university,AVG(Donation_Data.donation) AS
avg_donation
FROM Donor_Data2
FULL OUTER JOIN Donation_Data
ON Donor_Data2.id=Donation_Data.id
GROUP BY university
ORDER by AVG(Donation_Data.donation) DESC
LIMIT 10;
```

5.
```
SELECT
    state,
    AVG(donation) AS avg_donation
FROM
    Donation_Data
GROUP BY
    state
ORDER BY
    avg_donation DESC
LIMIT 10;
```

Findings and Recommendations

Findings

1. **Donor Demographics**
   - Demographic Insights: My analysis of donor data revealed valuable demographic insights:
     - The majority of donors are located in Califonia, with 113 donors.
     - California also yield the highest amount of donation.
2. **Donation Frequency**
   - Donation Frequency Analysis: I examined donation frequency among donors:
     - On average, Monthly donations gave high amounts followed by yearly, once and weekly donations,
     - Yearly and Monthly donors tend to make more consistent contributions.
3. **Donation Amount**
   - Donation Amount Trends: After my analysis of donation amounts provided the following insights:
     - The average donation amount is 249.085, with 41.3% of donors contributing at or above this level.
     - Donors in the accounting field consistently make larger donations, with an average contribution of 256.3
4. **Geographic Analysis**
   - Geographic Distribution: I analyzed the geographic distribution of donors:
     - South Dakota exhibits the highest average donation amount, suggesting a potentially untapped donor base.

Findings and Recommendations

Recommendations

1. **Donation Amount Strategies**
   - Donation Amount Optimization: Optimize donation amount strategies:
     - Launch targeted campaigns to motivate donors to reach or exceed the average donation amount.
     - Create giving levels that align with different donor segments' giving patterns.
2. **Frequency-Based Strategies**
   - Frequency-Based Strategies: Implement strategies to engage donors with different frequency preferences:
     - Encourage one-time donors to consider more frequent contributions through personalized appeals.
     - Recognize and appreciate the loyalty of frequent donors with special acknowledgments
3. **Geographic Expansion**
   - Expand Geographic Reach: Capitalize on the growth in South and North Dakota:
     - Increase marketing efforts in universities to further enhance donor engagement.
     - Consider hosting local events or partnerships to deepen ties with the community.

Conclusion

Throughout the course of this data analysis project for Education for All, several key insights and learnings have emerged, shedding light on donor behavior, preferences, and opportunities for enhancing fundraising strategies. This project has not only deepened my understanding of the donor landscape but has also showcased the application of essential data analysis skills.

Discoveries and Learnings:

1. Donor Insights: I've gained valuable insights into donor demographics, donation frequency, and donation amounts. These insights have provided a clearer picture of the donor base.
2. Preference Analysis: By segmenting donors and analyzing their preferences, I've uncovered actionable information that can drive tailored fundraising efforts.
3. Geographic Potential: Exploring geographic trends has revealed potential growth opportunities in specific regions, offering a pathway to expand the donor network.
4. Communication Effectiveness: Understanding the effectiveness of various communication channels has highlighted the importance of strategic messaging and engagement.

Skillset Showcased:

- Data Collection and Cleaning:
- Exploratory Data Analysis (EDA)
- Segmentation and Preference Analysis:
- Geographic Analysis
- Communication Effectiveness Analysis