DATA ANALYST: SQL PORTFOLIO

Professional Background

I am a graduate of The Federal Polytechnic Ado-Ekiti, Ekiti state, Nigeria. I worked as a Front Desk Officer in a Private school, for 6months and I currently work as a customer service representative at a financial technology company.

I have a certification of Excellence at thetechytrainfoundation for the techup-girls, where we learned about technology and basic digital skills. I also have a Professional Certification In Customer Service.

I love learning and I'm passionate about self-growth and development. I love helping and reaching out to other with my knowledge.

I am proficient in structured query language (SQL), Microsoft Excel, data visualization, data cleaning, presentation Skills. I also have excellent communication skills, attention to detail, as well as great listening & critical thinking skills

My Vision is to develop a career in Data Analysis, to a be a disciplined and insightful Data Analyst with an eagerness to leverage big data interpreting and visualizing skills.

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Introduction

The business Background is based on a charity Organization called Education for All. The Business problem is to find strategies on how to raise funds for the organization. To do this, the data on donor insights and donation rates needs to be presented. There's also a need to present insights from the donation data to inform fundraising strategy and increase donations.

Within the Fundraising team, the objectives are to:

- Increase the number of donors in the database
- Increase the donation frequency of the donors.
- Increase the value of donations in the database.

Root Cause Analysis

Root cause analysis is the process of discovering the root causes of problems in order to identify appropriate solutions.

To understand the Business Problem, the Data of the existing Donors, the frequency of the Donation and the donation amount needs to be analyzed and evaluated.

In order to evaluate the Data of the existing Donors by analyzation and Visualization, these questions need to be asked:

- **How many donors do we have in total?**
- **What is the total amount of Donation?**
- **What is the highest donation made?**
- **What state has the highest donor?**
- **Who are the top 20 donors and what is their frequency of donation, job field, gender, and university attended?**

Root Cause Analysis

The root cause Analysis:

- **Q: Why did the charity Organization need to raise funds?**

  A: The organization did not have enough fund.
- **Q: Why did the organization not have enough fund?**

  A: The organization did not have enough Donation.
- **Q: Why did organization not have enough donation?**

  A: Some donors did not donate much and the donation amount varies.
- **Q: Why did some Donors not donate much which caused variations in donation?**

  A: Some Donor's job field do not pay much?
- **Q: Why did some donor job field not pay much?**

  A: Some donors did not attend universities and these makes their salary not as much, which will cause variation in the donation amount and the donation frequency.

Insights

Two Datasets EFO_Donation_Data and EFO_Donor_Data were provided to solve and answer the business problem.

EFO Donation Data includes:

Id

First name

Last Name

Email

Gender

Job field

Donation

State

Shirt Size

EFO Donor Data includes:

Id

Donation frequency

University

Car

Second language

Favorite color

Movie genre

Insights

SQLite was used to analyze my findings from the Data and Tableau was used to create Visualization.

The Datasets supplied (EFO Donation Data and EFO Donor Data) was imported into SQLite.

The SQL queries/Commands used to analyze the Datasets are:

- JOIN
- ORDER BY
- WHERE
- AND
- SUM()
- COUNT()
- AVG()
- GROUP BY
- HAVING
- LIMIT()

The SELECT command was used to all Data in the Datasets.

```
1 SELECT * FROM Donation_Data;
2 SELECT * FROM Donor_Data2;
```

Insights

To find how many donors we have in total, The COUNT() command was used.

```
SELECT COUNT(donation)
FROM Donation_Data
```

To find the total amount of Donation, The SUM() command was used.

```
SELECT SUM(Donation)
FROM Donation_Data
```

MAX() command was used to find the highest amount donated.

```
SELECT MAX(Donation)
FROM Donation_Data
```

To know the state with the highest donor, The Statement below was queried.

```
SELECT state, COUNT(*)
FROM Donation_Data
WHERE donation > 400
GROUP BY state
ORDER BY COUNT(*) DESC
```

Insights

Top 20 Donors, their donation, gender, job field, state, donation frequency and university. The statement has shown below was used to determine this.

```sql
SELECT Donation_Data.gender, Donation_Data.job_field, Donation_Data.donation, Donation_Data.state,Don
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
ORDER BY donation DESC
LIMIT 20;
```

States with over 40 Donors

```sql
SELECT state, COUNT(*)
FROM Donation_Data
GROUP BY state
HAVING COUNT(*) >40
ORDER BY COUNT(*) DESC
```

We further used some statement to gain more insights from the Datasets.

Statements to show the donation frequencies.

```sql
SELECT Donation_Data.gender, Donation_Data.job_field, Donation_Data.donation, Donation_Data.state,Donor
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE donation_frequency = 'Once'
ORDER BY donation DESC;
```

```sql
SELECT Donation_Data.gender, Donation_Data.job_field, Donation_Data.donation, Donation_Data.state,Donor
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE donation_frequency = 'Weekly'
ORDER BY donation DESC;
```

```sql
SELECT Donation_Data.gender, Donation_Data.job_field, Donation_Data.donation, Donation_Data.state,Donor
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE donation_frequency = 'Monthly'
ORDER BY donation DESC;
```

```sql
SELECT Donation_Data.gender, Donation_Data.job_field, Donation_Data.donation, Donation_Data.state,Dono
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE donation_frequency = 'Yearly'
ORDER BY donation DESC;
```

Insights

Statement to show donors who donated more than 400 with university education.

```
SELECT Donation_Data.job_field, Donation_Data.donation, Donor_Data2.university, Donation_Data.gender
FROM Donation_Data
LEFT JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE university != 'NULL'
AND donation >400
AND gender = 'Male'
ORDER BY donation DESC
LIMIT 20;
```


```
SELECT Donation_Data.job_field, Donation_Data.donation, Donor_Data2.university, Donation_Data.gender
FROM Donation_Data
LEFT JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE university != 'NULL'
AND donation >400
AND gender = 'Male'
ORDER BY donation DESC
```


Statement to show donors who donated more than 400 without university education.

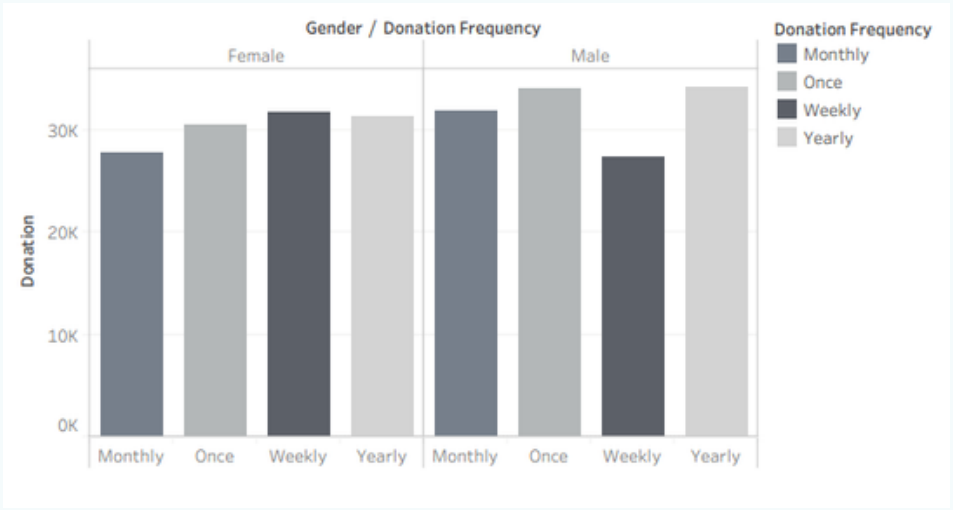

```
SELECT Donation_Data.job_field, Donation_Data.donation, Donor_Data2.university, Donation_Data.gender
FROM Donation_Data
LEFT JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE university != 'NULL'
AND donation >400
AND gender = 'Male'
ORDER BY donation DESC
```


```
SELECT Donation_Data.job_field, Donation_Data.donation, Donor_Data2.university, Donation_Data.gender
FROM Donation_Data
LEFT JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE university ISNULL
AND donation >400
AND gender = 'Male'
ORDER BY donation DESC
```

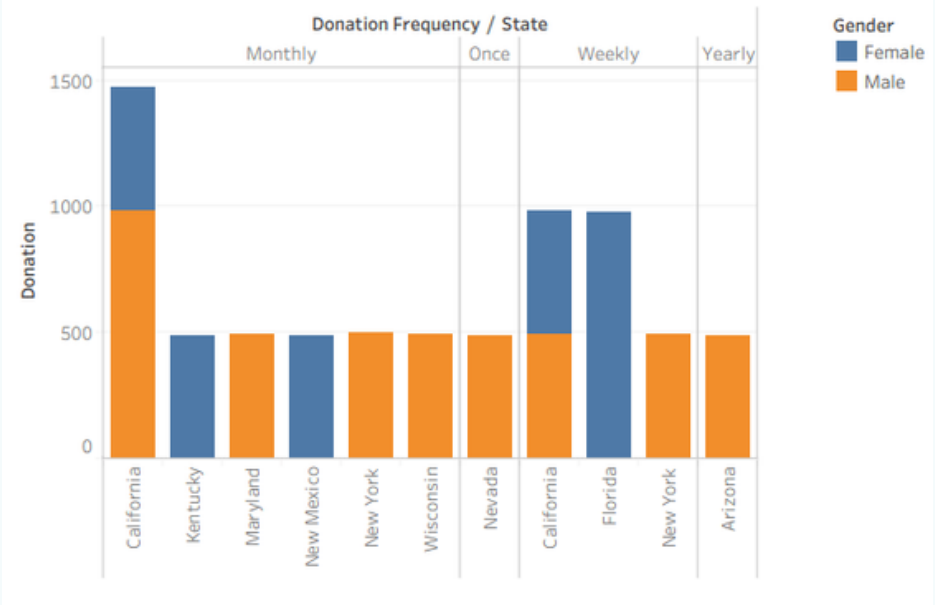
Insights

The visualization was done on Tableau

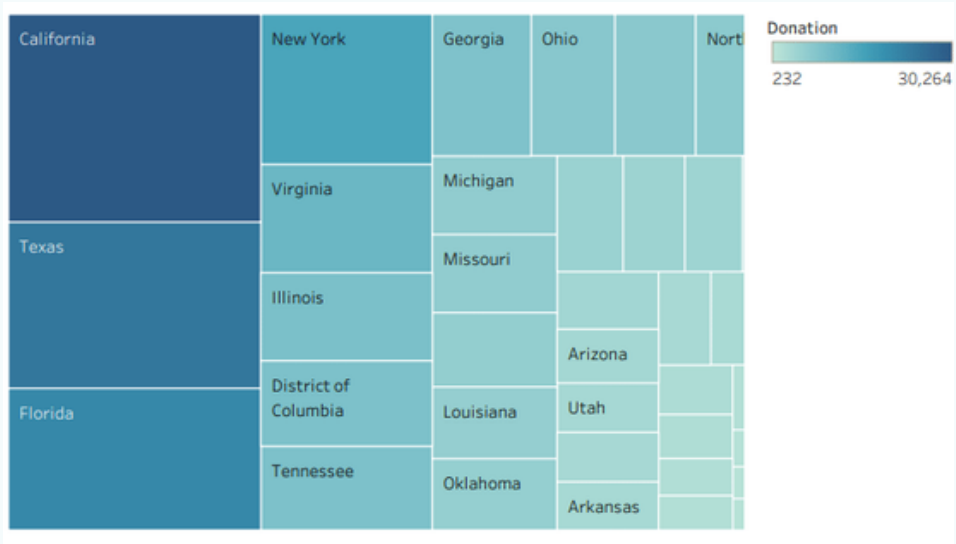
Donations by donation frequencies



This Viz shows that more donations were received mostly, Yearly and Once



This demonstrate that there are more Male Donors.



This Viz tells us that California, Texas and Florida have the highest donors.

Findings and Recommendations

Findings from the Analysis are shown below:

- **There are 1000 Donors in Total.**
- **The Total Donation is $249085.**
- **Max donation is $500**

Fig. 1.0 The highest Donation

state	job_field	donation	university
Michigan	Support	500	Walasik
New York	Product M	500	Leithgoe

Fig. 1..1 Top 5 Donors.

gender	job_field	donation	state	donation_	university
Male	Support	500	Michigan	Yearly	Walasik
Male	Product M	500	New York	Monthly	Leithgoe
Female	Legal	499	Virginia	Yearly	Sparhawk
Female	Sales	499	Delaware	Yearly	Antoszewski
Male	Sales	498	Wisconsin	Monthly	Trotton

Fig. 1.2 States with over 40 Donors.

state	COUNT(*)
California	113
Texas	95
Florida	90
New York	58

Findings and Recommendations

Top 20 donors with their gender, job field, donation, donation_frequency and university

Fig. 1.3

gender	job_field	donation	state	donation_frequency	university
Male	Support	500	Michigan	Yearly	Walasik
Male	Product Management	500	New York	Monthly	Leithgoe
Female	Legal	499	Virginia	Yearly	Sparhawk
Female	Sales	499	Delaware	Yearly	Antoszewski
Male	Sales	498	Wisconsin	Monthly	Trotton
Male	Research and Development	497	New York	Weekly	Rockcliffe
Male	Support	494	California	Weekly	Cominetti
Female	Product Management	494	California	Monthly	Coates
Male	Human Resources	494	California	Monthly	Baumber
Male	Product Management	493	Maryland	Monthly	Armatidge
Male	Business Development	493	Louisiana	Yearly	null
Female	Business Development	492	Florida	Weekly	null
Female	Training	492	New York	Yearly	Minthorpe
Male	Training	491	Nevada	Once	McIlmorow
Female	Engineering	491	New Mexico	Monthly	Blackborn
Female	Engineering	490	Kentucky	Monthly	Heinert
Female	Marketing	489	Florida	Weekly	Fraser
Male	Training	489	California	Monthly	Menci
Male	Engineering	489	Arizona	Yearly	Blythin
Female	Research and Development	488	California	Weekly	Turford

Fig. 1.4 Sum total of Donors and Donation with their Donation frequencies.

Donation_fr	Donations	Donors
Once	64586	264
Weekly	59152	245
Monthly	59680	232
Yearly	25667	259

Findings and Recommendations

This tables shows Donors (male and female) with university education who donated over $400.

Fig. 1..5

Gender	University	Donation
Female	66	29801
Male	80	36227

This tables shows Donors (male and female) who donated over $400 without university Education.

Fig. 1.6

Gender	Without_	Donation
Female	28	12466
Male	26	11476

This report shows that majority of the Donors live in California, Texas and Florida. It also tells us that majority of the Donors donated Yearly and once.

In this report from fig. 1.5 we have more male donors with higher donation than the female donors with University Education. Fig. 1.6 shows that we have more female donors without university education than male donors without university education.

This report recommends that to raise more funds for the Charity and increasing donations, the target audience should be from the states with the highest donation which is California, Texas and Florida according to this analysis. The Organization should also focus more on Males and Females with Education to raise more funds.

Conclusion

In conclusion, analysis of 2 datasets EFO Donation data and EFO Donor data was carried out to help the Charity Organization, Education for all. The purpose of this analysis is to find strategies to increase donors and most importantly to raise fund.

The Report of the Analysis tells that there are more Donors in California, Texas and Female, majority of the donors with the highest donations donated mostly Yearly and Once. It was also noticed that there are more donors with university Education irrespective of their gender.

This report tells the fundraising team, who should be the Target audience and where they can be found.