

# DATA ANALYST: SQL PORTFOLIO

PREPARED BY

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**Drive for success has made me have the mindset I can do all things through God who strengthens me, I have been thinking of ways to improve myself, due to my knowledge and degree in Mathematics, which made me see data analysis as the ideal skill to improve myself.**

# Professional Background

**I graduated from the University of Ilorin ,Kwara State, Nigeria. Where I studied Mathematics and Education.**

**I gained experience in teaching ,I taught Mathematics and Further Mathematics at Vera Grace Comprehensive College Era Lagos, Nigeria. I moved to Ghana into sales with my Uncle who is a dealer in Automobiles Spare parts., where I do most of the calculations.**

**I'm currently into phones and their accessories ,which I am working to improve with my skills in Digital Marketing which I got through Google Digital skills for Africa in 2020.**

**I have a website for my business which customers navigate into and order for my services , with my brand name ELVISION VENTURES(<https://elvision-ventures.business.site>).**

**I also work in the bootcamp at sidehustle internship workshop a group of 10 persons where we worked on some data to clean and get insights, our findings were uploaded on hashnode.com and twitter, (data Analytics team Cohort 6.0 on hashnode).**

**I'm hardworking and always ready to improve myself, going into data analyst won't only bring the door to success but also make me a problem solver and critical thinker.**

**To be successful in life you need to be ready to improve, you need to be updated with what is happening around ( follow the trends and don't be left out)**

# Portfolio Outline

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# Introduction

I was given a task as a data analyst by my head of fundraising in my organization ( Charity Education for All), to present the donor insights and donation rates.

Within the fundraising team my objectives are as follows

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

In two weeks my team is having a fundraising strategy meeting, I am to present insights from the donation data to inform my fundraising strategy and increase donations

I will be using the datasets from EFO\_Donation\_Data and EFO\_Donor\_Data to answer the business problems

I used the following SQL command in the course of the analysis, JOIN, ORDER BY, WHERE, BETWEEN AND,OR, SUM(), COUNT(), AVG(), GROUP BY and HAVING.

I also asked questions using Root Cause Analysis and also try to use it to understand the problem.

It have given me an insight to how to about collecting the datasets, and also using Tableau to prepare my visualization and make my report.

# Root Cause Analysis

The business problem is that there are low numbers of donation by individuals, the rate of regular donation is also low and lastly the amount the donors donated need increment.

Knowing the problem the solution is to get more donors, improve the existing donor and also look for donors that have the heart of giving.

I will be making insight by fetching data from the following questions.

What is the total number of donations?

How many male donors are donating?

How many female donors are donating?

What is the maximum and the minimum amount of donation by gender?

Is the donation base by gender ?

How many donors donate Yearly, Monthly, Weekly or once?

What is the donation by job field?

Which job field donated the most?

Who are the 10 highest donors and the top 10 lowest donors?

What state donates the most?

What is the maximum and the minimum amount of donation by state?

Using Root Cause analysis I understand that donation is base on willingness to give

I could ask the following questions

Why are some donors donating just once?

Why is the donation from some states low and some states high?

Why do some job fields we think can still give high among the lowest donors?

# Insights

I have been give two data set to work with , which are EFO\_Donation\_Data and EFO\_Donor\_Data to solve the business problem

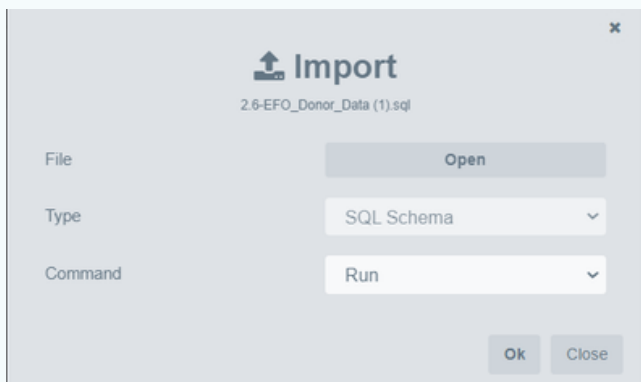
EFO\_Donation\_Data include the following dataset:

Id  
First name  
Last name  
Email  
Gender  
Job field  
donation  
state  
Shirt size

EFO\_Donor\_Data include the following data

Id  
Donation frequency  
University  
Car  
Second language  
Favourite colour  
Movie genre

The both datasets were imported into SQLOnline





I also use SELECT to view the data

```
SELECT *  
FROM Donation_Data
```

```
1 SELECT * FROM Donation_Data;
```

```
SELECT *  
FROM Donor_Data2;
```

```
1 SELECT * FROM Donor_Data2;
```

To get the total amount donated and the total number of donors  
I used the SUM() and the COUNT()

```
1 SELECT SUM(donation)    SELECT COUNT(donation)  
2 FROM Donation_Data;    FROM Donation_Data;
```

I also check for the donation by state using  
COUNT()

```
SELECT state, COUNT(donation)  
FROM Donation_Data  
GROUP BY state  
ORDER BY COUNT(*) DESC  
LIMIT 10;
```

I also try to know the number of males and females that donated and also the maximum and the minimum amount each of the gender donated and the total number of male and female donors

```

1 SELECT COUNT(donation)
2 FROM Donation_Data
3 WHERE gender= 'Female';
4

```

```

1 SELECT COUNT(donation)
2 FROM Donation_Data
3 WHERE gender= 'Male';
4

```

The MIN() was used to get the minimum amount donated by each gender

```

SELECT MIN(donation)
FROM Donation_Data
WHERE gender='Male';

```

```

1 SELECT MIN(donation)
2 FROM Donation_Data
3 WHERE gender='Female';
4

```

The MAX() was used to get the maximum amount donated by each gender

```

SELECT MAX(donation)
FROM Donation_Data
WHERE gender='Male';

```

```

1 SELECT MAX(donation)
2 FROM Donation_Data
3 WHERE gender='Female';
4

```

To know the donation once, weekly, monthly or yearly I use JOIN command to connect both tables EFO\_Donation\_Data and EFO\_Donor\_Data together to be able get more insight

```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation_frequency= 'Once'
ORDER BY donation DESC;

```



```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation_frequency= 'Weekly'
ORDER BY donation DESC ;

```

```

1 SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
2 FROM Donation_Data
3 JOIN Donor_Data2
4 ON Donation_Data.id= Donor_Data2.id
5 WHERE donation_frequency= 'Once'
6 ORDER BY donation ;
7
8

```

```

1 SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
2 FROM Donation_Data
3 JOIN Donor_Data2
4 ON Donation_Data.id= Donor_Data2.id
5 WHERE donation_frequency= 'Weekly'
6 ORDER BY donation;
7
8

```

```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation_frequency= 'Monthly'
ORDER BY donation DESC;

```

```

1 SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
2 FROM Donation_Data
3 JOIN Donor_Data2
4 ON Donation_Data.id= Donor_Data2.id
5 WHERE donation_frequency= 'Monthly'
6 ORDER BY donation;
7
8

```

```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation_frequency= 'Yearly'
ORDER BY donation;

```

```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donor_Data2.donation_frequency
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation_frequency= 'Yearly'
ORDER BY donation DESC;

```

I also use the JOIN command to know the donors with or without University education , donated below and above 400 dollars .I also try to know if the reason for donation is base on University

```

SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donation_Data.gender, Donation_Data.job_field, Donor_Data2.donation_frequency, Donor_Data2.university
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation >= 400
AND university IS NULL
ORDER BY donation DESC;

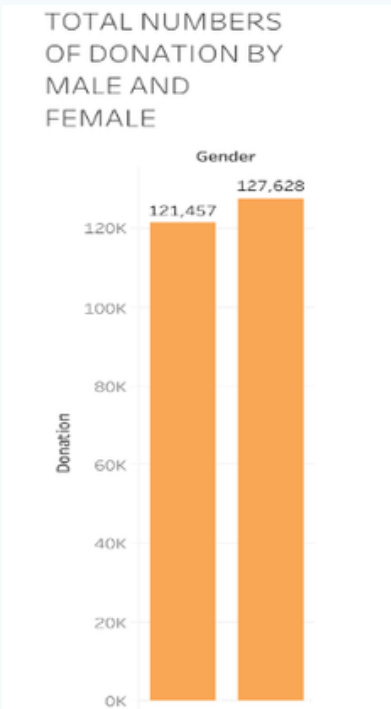
```

```

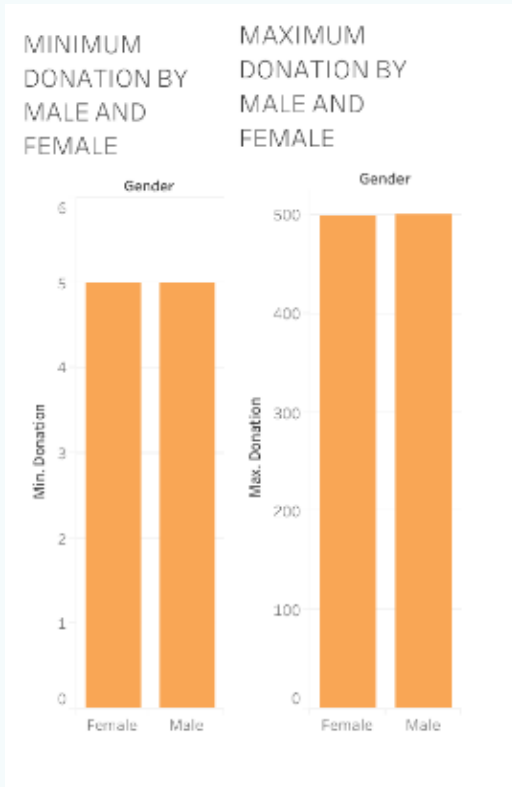
SELECT Donation_Data.first_name, Donation_Data.last_name, Donation_Data.donation, Donation_Data.gender, Donation_Data.job_field, Donor_Data2.donation_frequency, Donor_Data2.university
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id= Donor_Data2.id
WHERE donation >= 400
AND university != 'NULL'
ORDER BY donation DESC;

```

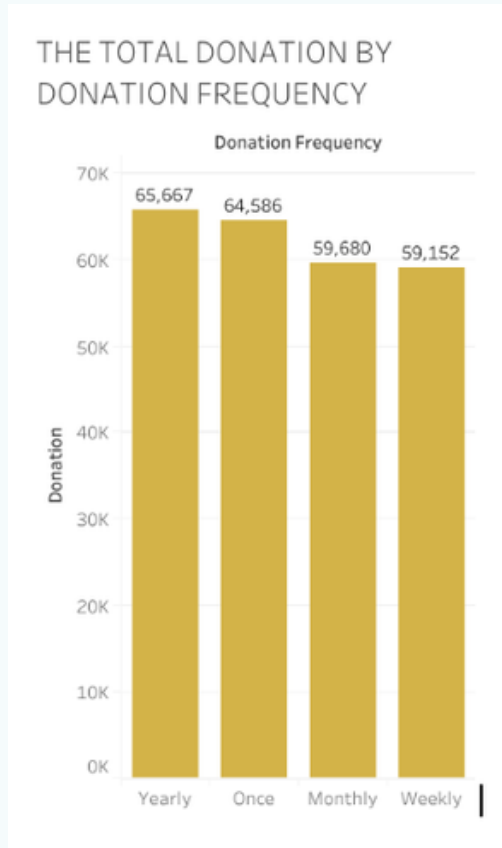
Tableau was used for visualization, to give a visual insight of my findings  
The insight I got shows that the total number of male and female donation are 127,628 and 121,457 respectively and it shows the donations amount is not based on gender



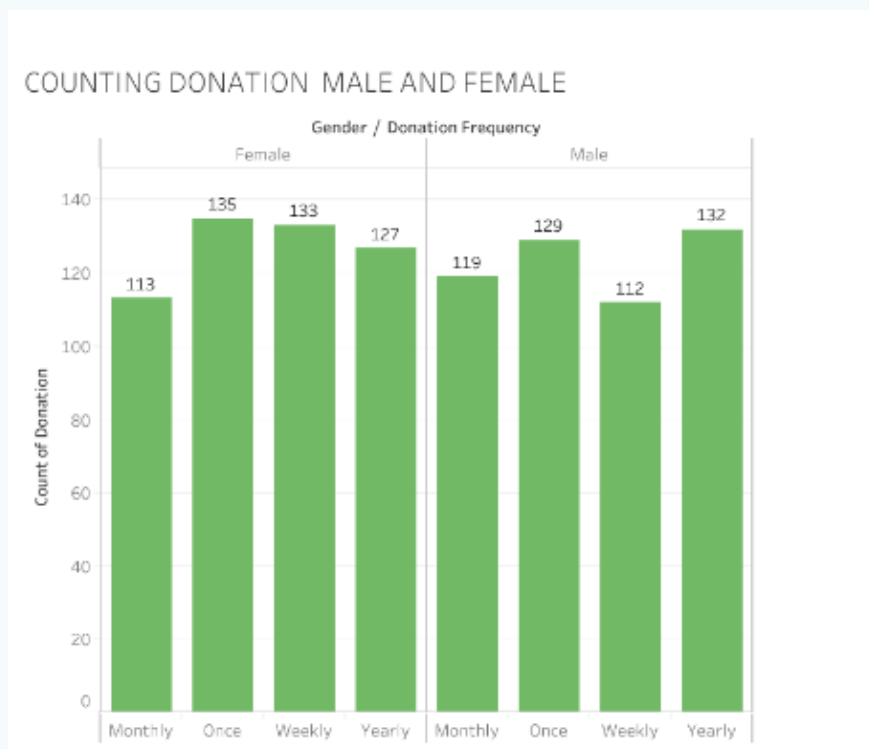
Looking at the maximum and the minimum donation , it doesn't show any significant differences, that is , the amount donated was not based on gender,



From the below visualization, it shows that the majority of our donors who donated are Yearly and Once, the amount of weekly and monthly are very low

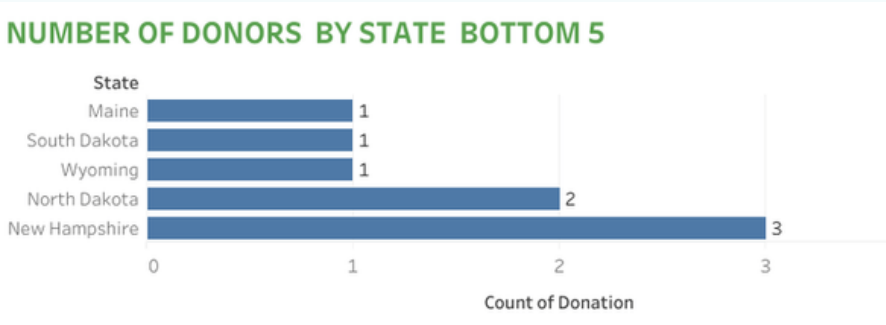
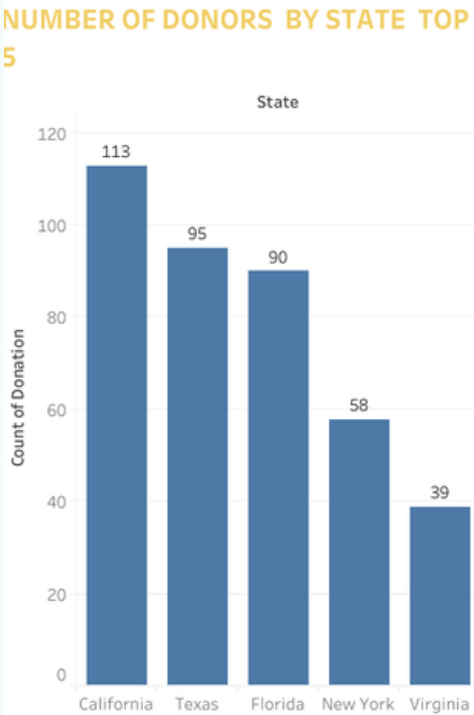
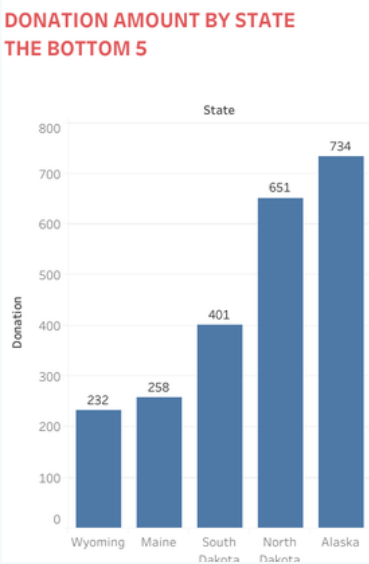
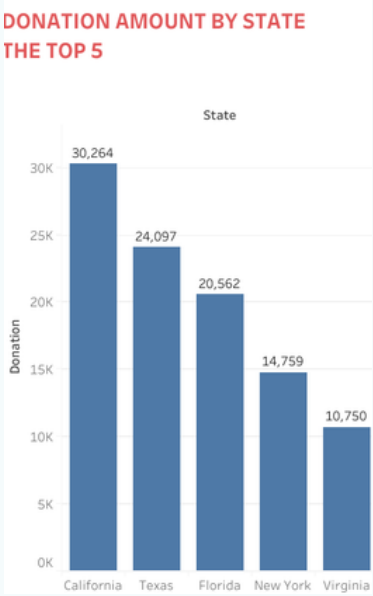


The below visualization shows the numbers of male and female that donated monthly, weekly, once and yearly, it shows, more female than male donate monthly, also more female than male donated once, still more female than male donated weekly, it is only in the yearly that male donated more than female.

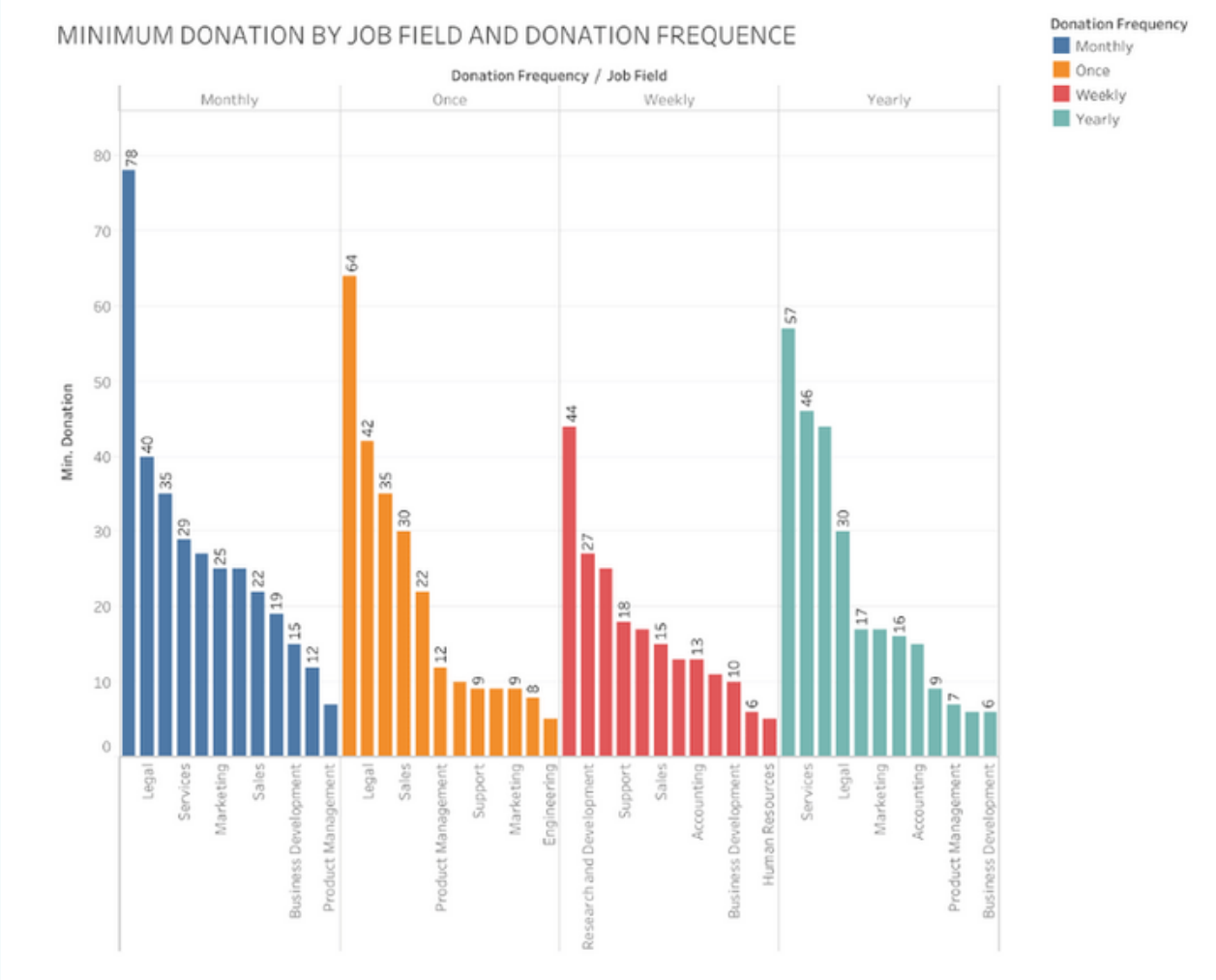


Looking at visualization above the amount donated and the numbers of male and female donors, it is seen that more female donated but in the quality of donation, the male donated more.

From the below visualization we can see California Florida and Texas have the highest amount donated and also the maximum amount donors ,Wyoming has the lowest amount of donation , Wyoming, Maine and South Dakota has just one donor



From my visualization I found out that legal job field has more donors, also notice that the engineers has been poor in donating and also more people donated once and yearly



# Findings and Recommendations

From the dataset given I got the following insight

1. The total number of donors is \$1000
2. The total sum of donations is \$249085
3. Male donated \$127628
4. Female donated \$121457
5. The highest donation is \$500
6. The lowest donation is \$5
7. California has the largest amount of donors and the total numbers of donors
8. Wyoming, the lowest amount of donors
9. Wyoming, Maine and South Dakota has the lowest number of donors

From this shown shown that most of the donors are from California, Texas, Florida, New York have the highest numbers of donors

California	113
Texas	95
Florida	90
New York	58
Virginia	39

This are the bottom 5 states that has the lowest amount of donor

Maine	1
South Dakota	1
Wyoming	1
North Dakota	2
Alaska	3



The sum of all the donations and the donation frequency

donations	Donation frequency	Sum(donations)
292	Once	64586
28	Weekly	59152
178	Monthly	59680
255	Yearly	65667

From counting the total numbers of donors is 1000 by calculating it is showed that not all the 1000 are active donors because calculating  $292+28+178+255 = 753$ , so 753 are the active donors

The top 10 donors that donated once

Emmit	McKenzie	491	Once
Padraig	Trittam	488	Once
Shanie	Judd	486	Once
Hanson	Cuchey	482	Once
Averil	Crombie	482	Once
Kellina	Eastcourt	482	Once
Laney	Tales	481	Once
Barbara-anne	Tonsley	470	Once

The bottom 5 donors that donated once

Mavis	Tayspell	5	Once
Sigmund	Rudge	6	Once
Arturo	Tuffrey	8	Once
Marys	Cosby	9	Once
Peta	Kernar	9	Once
Mathilde	Josef	9	Once
Othella	Gong	10	Once
Austine	Eversley	12	Once
Ynes	Capelow	17	Once

Top 20 where donation frequency is weekly or monthly

First name	Last name	donation	Donation frequency
Wallie	Leather	500	Monthly
Worthy	Le feaver	498	Monthly
Amalea	Knill	497	Weekly
Tonnie	Stockney	494	Weekly
Corbett	Lansdale	494	Monthly
Nathaniel	McGenn	494	Monthly
Beverle	Camacke	493	Monthly
Hurley	Bogey	492	Weekly
Babbette	Fyers	491	Monthly
Karilyn	Ivan	490	Monthly
Charlotta	Bellison	489	Weekly
Ludvig	Aleksandrowicz	489	Monthly
Maura	Feroli	488	Weekly
Karena	Andrieu	487	Weekly
Nico	Twinterman	484	Weekly
Emery	Rospars	483	Monthly
Wilma	Tummond	483	Monthly
Shana	Farnsworth	482	Weekly
Hedwig	Ioselev	482	Monthly
Huntlee	Durbin	480	Monthly

From the tables below it shows that those with University donated more than those without University

	TOTAL DONATION OF UNIVERSITY GRADUATES	TOTAL DONATION OF NON UNIVERSITY GRADUATE
MALE	\$95996	\$31,632
FEMALE	\$91460	\$29,997
TOTAL	\$187456	\$61,629

	TOTAL DONORS OF UNIVERSITY GRADUATES	TOTAL DONORS OF NON UNIVERSITY GRADUATE
MALE	370	122
FEMALE	378	130
TOTAL	748	252

# Conclusion

I have been given two dataset EFO\_Donation\_Data and EFO\_Donor\_Data to solve the business problem for my company Education For All and I was ask to increase the numbers of donors and the also increase the donation frequency.

I found out that we have some inactive donors out of the 1000 donors, so we need to reach out to them and also know the reasons behind them not donating..

I also find out that the numbers of weekly and monthly donation are extremely low, compared to the one of Once and Yearly, so we will increase the weekly and the monthly donation.

We will also work to get donation from other states because majority of our donors live in California, Texas and Florida.

The donation for people with university education are more ,I think there should be an awareness to encourage those without university education to donated more and also try to encourage other university graduates to donated more by visiting universities through awareness programs.

From our data findings it is shown that the donation are not related by gender but by willingness so I think we should reach out to people who has the willingness to give and so those that can donate more , We can also get some donors if we can advert on useful channels (social media , Facebook, twitter, Instagram etc.) and even on television and radio stations.