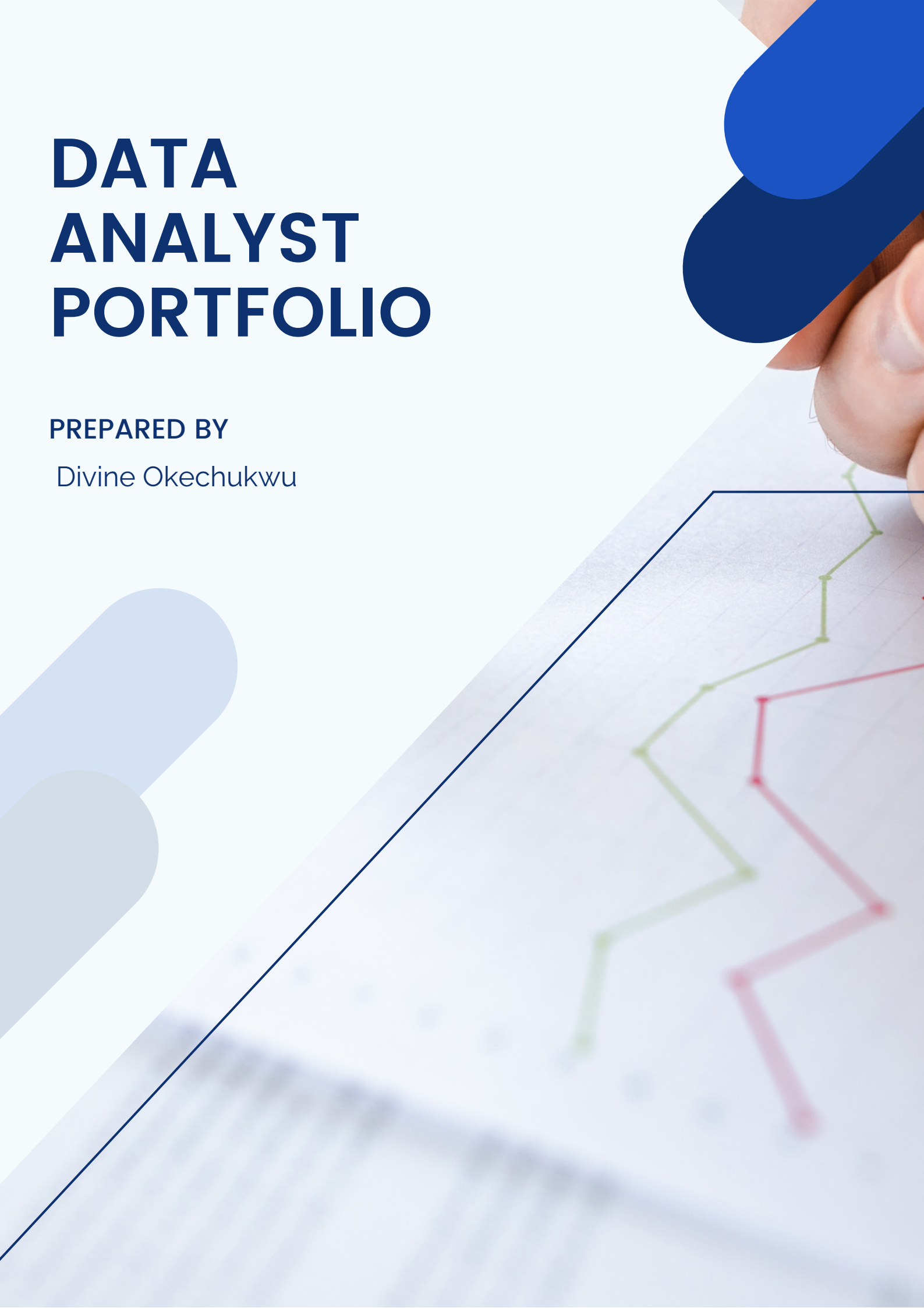
DATA ANALYST PORTFOLIO

PREPARED BY

Divine Okechukwu



Professional Background

I am a results-driven chartered accountant with great knowledge and experience in the preparation of financial statements, financial management reporting and analysis. I am knowledgeable in the accounting procedures/operations of multiple industries including financial services, Real estate, manufacturing, NGOs, hospitality, healthcare, FMCG, transport and logistics e.t.c.

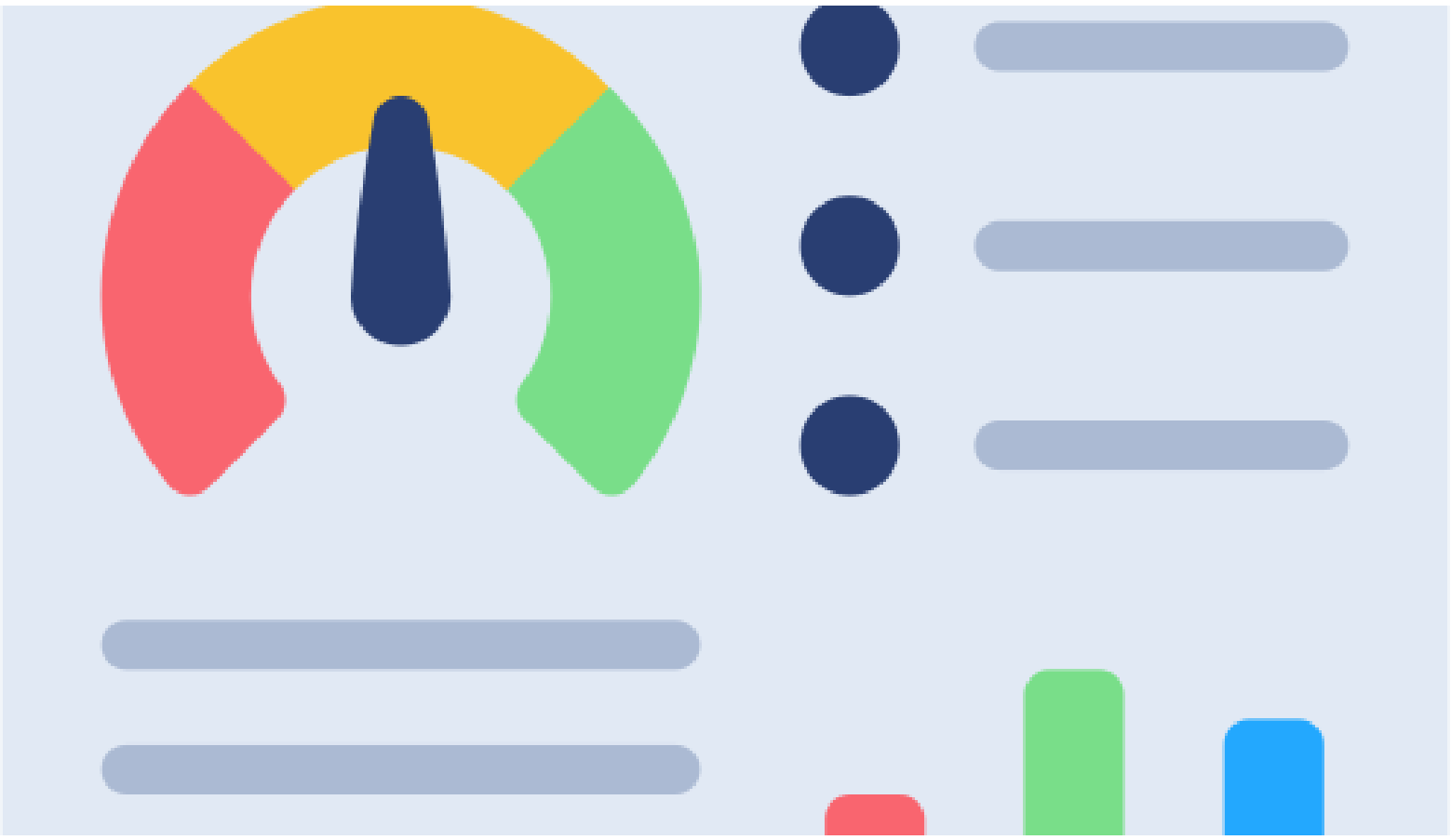
Majority of my 5 year experience has been consulting for SME's in the above listed industries and aiding them to achieve the financial goals of their companies. In this time, I have been able to cut data processing time for clients by over 70% and established work procedures that reduced reporting time by at least 50% to name a few achievements.

At this stage of my career, as a life-long learner, I am looking to pivot from being a financial consultant to being a Data Analyst. I believe that my experience collecting, collating and analysing financial raw data which I then turn into financial statements and management reports would be very valuable for me as a data analyst. A few new skills I have learned on this journey to pivoting are:


Tableau and Power Bi

Asides my professional qualifications, I also have great interpersonal and communication skills. I am an excellent team player and team manager and I learn new skills very quickly.

Portfolio Outline



Introduction

I am working hypothetically as a Data Analyst for a charity called **Education for ALL.** I have been required to present data on donor insights and donation rates with the following objectives in mind:

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

I was provided with data sets on previous donations and donors.

I used the following SQL commands to analyse the data: Joins, Order by, Group by, Where, Count, Sum, Count Distinct, Max, Order by. I also utilized the Tableau visualization tool to explore the da the

I used Root Cause Analysis to understand the problem and ask the right questions.

As a result,I discovered significant insights from the data sets and created visualisations and a report for my team

Root Cause Analysis

Root cause analysis (RCA) is a methodical process that aims to go beyond the immediate symptoms or superficial factors and uncover the primary reasons or root causes behind an issue. I decided to apply root cause analysis to ensure that I was focusing on the right problem.

The problem statement in this scenario is "How can Education for All leverage donor insights and donation data to strategically increase the number of donors, improve donation frequency, and enhance the value of donations in the organization's database, ultimately driving higher fundraising outcomes for the following year?"

In other to further understand the problem, I utilised the "5 why's" approach and asked the following questions:

Q. Why do we want higher fundraising outcomes?
A. Because we don't have enough to meet the needs of the charity

Q. Why don't we have enough to meet our needs?
A. Because we do not have enough donations

Q. Why don't we have enough donations?
A. Because we do not have enough donors

Q. Why don't we have enough donors
A. Because donors are not properly distributed across all 50 states of the Country

Q. Why are donors not properly distributed?
A. Because we are not advertising enough

Therefore root cause is that the charity does not have enough publicity

Insights

I was provided with two datasets EFO_Donation_Data and EFO_Donor_Data.

EFO_Donation_Data contains the following data:
id, first_name, last_name, email, gender, job_field, donation,, state and shirt_size

EFO_Donor_Data2 contains the following data:
id, donation_frequency, university, car, second_language, favourite_colour, movie_genre

I imported the two datasets into SQlite and explored the data in the following ways:

>I checked out the two datasets using SELECT

```
SELECT *
FROM Donation_Data

SELECT *
FROM Donor_Data2
```

> I checked the total donations collected so far by the charity checking the two datasets

```
SELECT COUNT(*)
FROM Donation_Data

SELECT COUNT (*)
FROM Donor_Data2
```

> I checked how many of the 50 states in the United states the charity has donors from

```
--how many states do we have donors from
SELECT COUNT (DISTINCT state)
FROM Donation_Data
```

> I checked how many donations the charity received from each state

```
SELECT state, COUNT(*) AS 'Number_of_donations'
FROM Donation_Data
GROUP BY state
```

> I used INNER JOIN to determine if occupation had any bearings on frequency of donations

```
--does occupation determine frequecy of donation
SELECT Donation_Data.job_field, Donor_Data2.donation_frequency
FROM Donation_Data
INNER JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
```

> I used MAX to find the highest value of a single donation made in the past

```
SELECT max(donation)
FROM Donation_Data
```

> I checked to see what gender has donated the highest in terms of value

```
1 --seeing which gender donates most
2 SELECT gender, sum(donation)
3 FROM Donation_Data
4 GROUP BY gender
```

> I also checked to see what gender donated more frequently (weekly)

```
1 SELECT Donation_Data.gender, COUNT(Donor_Data2.donation_frequency)
2 FROM Donation_Data
3 INNER JOIN Donor_Data2
4 ON Donation_Data.id = Donor_Data2.id
5 WHERE Donor_Data2.donation_frequency = 'Weekly'
6 GROUP BY Donation_Data.gender
```

> I checked the university that produced the most donations for the charity

```
SELECT Donor_Data2.university, max(Donation_Data.donation)
FROM Donation_Data
INNER JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
```

> I checked the occupation that provides the most donations for the charity

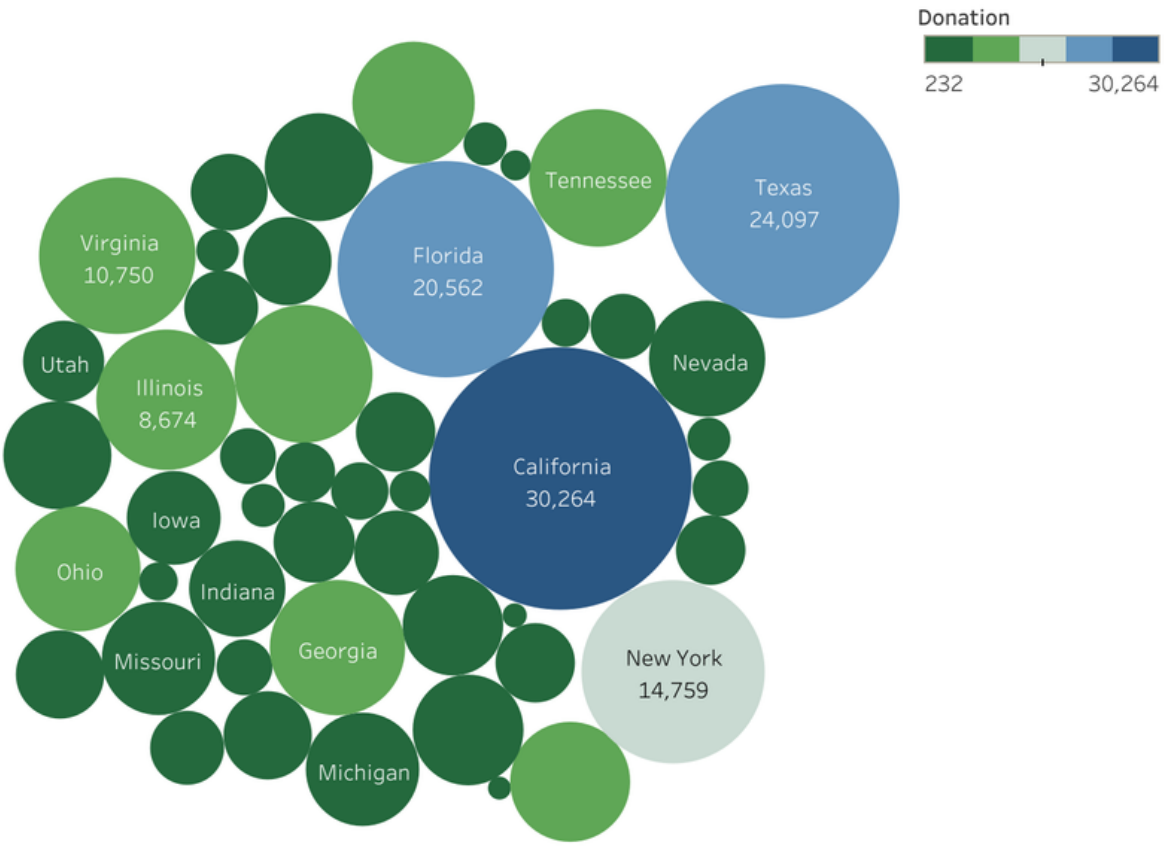
```
SELECT job_field, sum(donation)
FROM Donation_Data
GROUP BY job_field
ORDER BY sum(donation) DESC
```

> I compared the total donations vs the donations from only university graduates

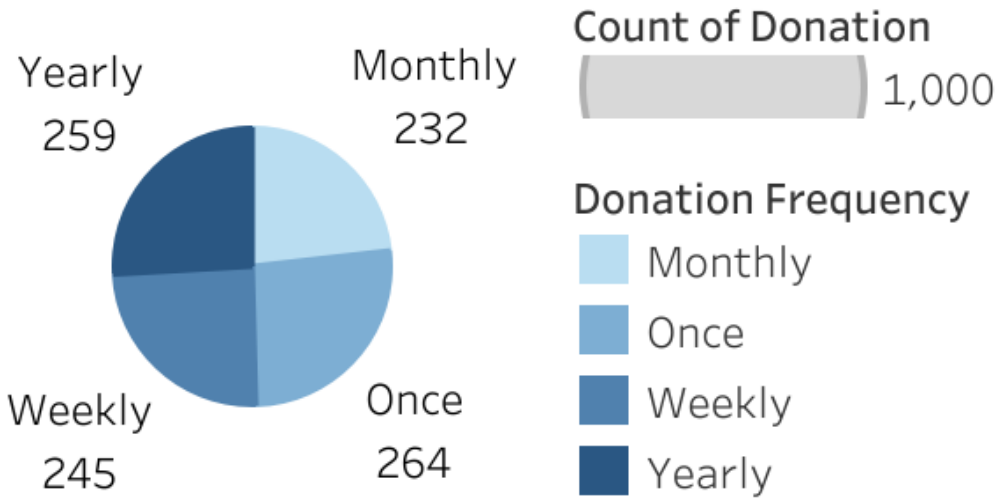
```
---All donations
SELECT sum(donation)
FROM Donation_Data

--donations from university graduates
SELECT sum(Donation_Data.donation)
FROM Donation_Data
LEFT JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE Donor_Data2.university != 'NULL'
```

I also imported the data sets into Tableau public and explored the data to produce the following visualisations

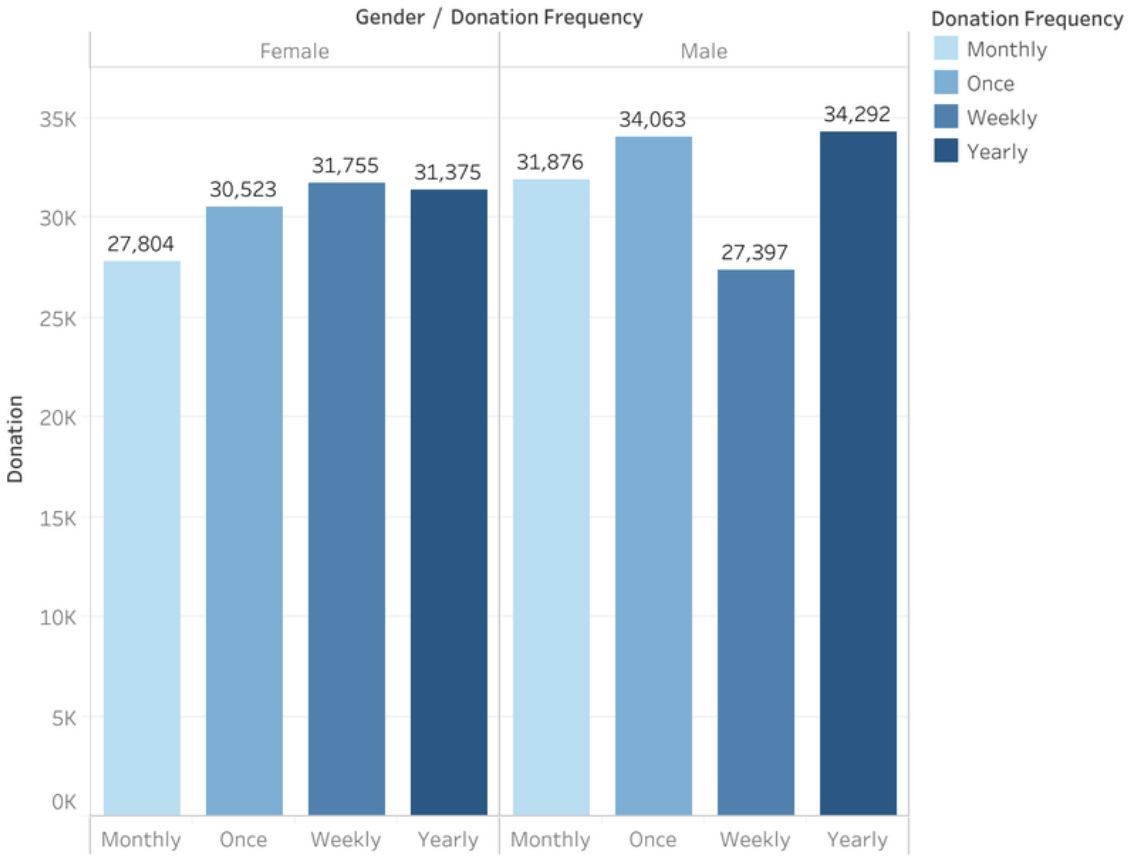
Total donations per state



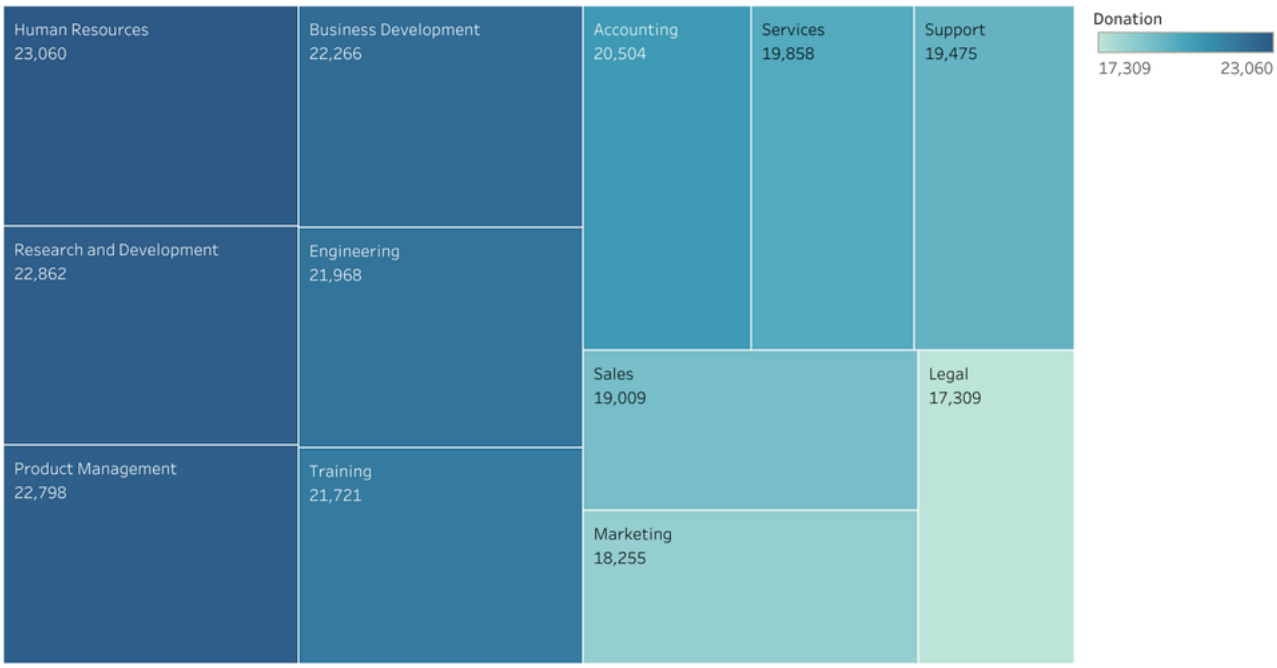
Number of donations by frequency



Donation frequency by Gender



Donations by Profession



Findings and Recommendations

Findings from my SQL Queries are listed below:

- Total Donations so far are 1000
- The Charity has donations from 49 out of the 50 states in the united states
- Number of donations per state indicating that only about 8% of the states on the donation pool have more than 59 donors

State	Number of donations
Maine, South Dakota, Wyoming	1 each
North Dakota	2
Alaska, New Hampshire	3 each
Hawaii, Montana	4
Mississippi	5
New Jersey, South Carolina, West Virginia	6 each
Delaware, Idaho, New Mexico	7 each
Nebraska	8
Arkansas, Oregon, Utah	9 each
Kansas	10
Alabama, Maryland	11 each
Connecticut, Wisconsin	12 each
Iowa	13
Arizona, Minnesota	14 each
Kentucky	15
Indiana, Massachusetts, Washington	17 each
Michigan, Oklahoma	20 each
Colorado, Louisiana, Nevada	22 each
Missouri, Pennsylvania	23 each
District of Columbia, Tennessee	30 each
Ohio	32
Georgia, North Carolina	33 each
Illinois	34
Virginia	39
New York	58
Florida	90
Texas	95
California	113

- The highest single donation is 500 dollars
- Females donate more frequently than men

Gender	Number of weekly donations
Female	133
Male	112

- There are more Alumnus of Walasik university than any other university on the donor list
- The Human Resources Job field contributes the most to the donor pool

job_field	sum(donation)
Human Resources	23,060
Research and Development	22,862
Product Management	22,798
Business Development	22,266
Engineering	21,968
Training	21,721
Accounting	20,504
Services	19,858
Support	19,475
Sales	19,009
Marketing	18,255
Legal	17,309

- There are more university graduate donors than non university graduates

Findings from my Tableau data exploration are listed below:

- California contributes the most donations to the charity
- Yearly and one time donations are more than weekly and monthly donations
- The top frequency of donations amongst women is weekly while amongst men it's yearly

Based on the above findings, my recommendations would be as follows:

- Focus more advertising efforts on states like Maine, South and North Dakota, Alaska and all states that make up the 92% of states with less than 50 donors
- Donors should be sensitized more on the importance of their donations by publishing the work done by the charity in order to increase the value of single donations.
- Gender specific advertisement should be targeted at men in order to increase their tendency to donate more frequently
- Marketing efforts should be intensified in the legal, marketing, sales support and service industries as they all contribute less than 20,000 dollars to the donation pool
- Marketing efforts should be targeted at University graduates as they have the tendency to donate more than non university graduates
- One of the major focuses of the charity should be to increase the income from more regular donations i.e weekly and monthly donations

Conclusion

Having analysed the two datasets provided I found that the data on the donor pool was mostly random with little similarities between them. This deepened the validity of the problem statement derived from root cause analysis which states that advertising is truly the problem of the Charity. If more people knew, donations would be more. Donation amounts are also not as frequent which implies that donors though willing to donate have little idea of the impact their donations are making hence their unfrequent commitment.

Also while some states like California have high number of donors single handedly contributing more than 10% of donations, other states can be sensitised to increase the number of donors from those locations.

The donor pool is made up majorly of people who are educated and therefore understand the value in the mission of Education for all and in the new recommended advertising efforts by the charity that factor should heavily be considered

With good efforts made toward increasing the reach of the charity, i believe Education for all can achieve their objective of Increasing the number of donors, donation frequency and value of donations in the database.