PROFESSIONAL BACKGROUND

Hi, I am Christian Chimezie. I have a Bachelor of Science degree in Mathematics Education with over three years of experience collecting, cleaning, and interpreting data. I am passionate about developing businesses through data-driven decisions by identifying facts and trends.

My skills are data analysis and problem-solving and I recently completed the 365 Data Science certified MySQL for data analysis and business intelligence on **Udemy** and the Jobberman certified accelerated soft skills course.

As a **volunteer business analyst** at Cinaj Ventures and Farms, I evaluated business processes, anticipated requirements, identified areas for improvement, developed and implemented solutions. By February, I implemented a feeding program for the rabbits that resulted in a 20% reduction in monthly feed costs and a 10% increase in productivity. During my time at the company, I have improved my interpersonal skills and built great customer relationships.

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INTRODUCTION

Project Description:

EDUCATION FOR ALL, a charity, aims to boost donations for the coming year and needs a fundraising strategy to accomplish this. The team will be having a meeting in two weeks to plan for the following year.

I was given two data sets, Donation Data and Donor Data, to work with as a data analyst. The Donation Data collection includes the following information: Donor ID, Donor first name, Donor last name, Donor email address, Donor gender, Donor job field, Donation amount, Donor state of residence (US), and Donor t-shirt size. Donor Data includes the following information: Donor ID, Donation frequency, Donor university, Donor car make, Donor second language, Donor favourite colour, and Donor favourite film genre.

I was tasked with the duty of extracting insights and patterns from the data sets provided and developing a strategy for increasing the charity's donations the following year. I also use Tableau to visualize the data and uncover more hidden insights.

I also implored the **FIVE WHYS OF ROOT CAUSE ANALYSIS** to explore the underlying causes and effects of the problem.

From the analysis, it is suggested that **EDUCATION FOR ALL** adopts **recurring donations** as it provides a consistent, steady, predictable source of income and manage relationships with **high-value donors** by engaging and contacting them on a regular basis to keep them in the loop.

ROOT CAUSE ANALYSIS PROCESS

To find what the solution for a problem is it is better to know the cause for this problem,

For this problem, I used Root Cause Analysis (RCA).

Problem Statement:

How to increase donations for the following year?

- **Why is there a low value of Donations in some States?**

Answer: Because there is a low number of Donors in those States.

- **Why is there a low number of Donors in those States?**

Answer: Because the Donors do not donate recurrently.

- **Why don't the Donors donate recurrently?**

Answer: Because they do not have good-paying jobs.

- **Why don't they have good-paying jobs?**

Answer: Because most of them did not attend Tertiary Institutions.

- **Why did most of them not attend Tertiary Institutions?**

Answer: Because there is a low number of Tertiary Institutions in those States.

INSIGHTS FROM THE ANALYSIS

TOP 10 STATES WITH HIGH DONATIONS

```
SELECT STATE, SUM(DONATION), ROUND(AVG(DONATION),1),
COUNT(DONATION) FROM DONATION_DATA
GROUP BY STATE
ORDER BY SUM(DONATION) DESC
LIMIT 10;
```

California	**30,264**	**267.8**	**113**
Texas	**24,097**	**253.7**	**95**
Florida	**20,562**	**228.5**	**90**
New York	**14,759**	**254.5**	**58**
Virginia	**10,750**	**275.6**	**39**
Illinois	**8,674**	**255.1**	**34**
District of Columbia	**8,376**	**279.2**	**30**
Tennessee	**8,316**	**277.2**	**30**
Georgia	**8,046**	**243.8**	**33**
Ohio	**6,876**	**214.9**	**32**

Insight i

TOP 10 STATES WITH LOW DONATIONS

```
SELECT      STATE,      SUM(DONATION),ROUND(AVG(DONATION),1),
COUNT(DONATION)    FROM DONATION_DATA
GROUP BY STATE
ORDER BY SUM(DONATION) ASC
LIMIT 10;
```

Wyoming	**232**	**232**	**1**
Maine	**258**	**258**	**1**
South Dakota	**401**	**401**	**1**
North Dakota	**651**	**325.5**	**2**
Alaska	**734**	**244.7**	**3**
West Virginia	**793**	**132.2**	**6**
South Carolina	**819**	**136.5**	**6**
New Hampshire	**841**	**280.3**	**3**
Hawaii	**875**	**218.8**	**4**
Montana	**1009**	**252.3**	**4**

Insight i

DONATION FREQUENCY BY STATES WITH HIGH DONATIONS

```
SELECT DONATION_DATA.STATE, DONOR_DATA.DONATION_FREQUENCY
FROM DONATION_DATA
JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID
GROUP BY STATE
ORDER BY SUM(DONATION_DATA.DONATION) DESC
LIMIT 10;
```

California	**Yearly**
Texas	**Monthly**
Florida	**Yearly**
New York	**Weekly**
Virginia	**Weekly**
Illinois	**Weekly**
District of Columbia	**Yearly**
Tennessee	**Yearly**
Georgia	**Daily**
Ohio	**Never**

Insight iii

DONATION FREQUENCY BY STATES WITH LOW DONATIONS

```
SELECT DONATION_DATA.STATE, DONOR_DATA.DONATION_FREQUENCY
FROM DONATION_DATA
JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID
GROUP BY DONATION_DATA.STATE
ORDER BY SUM(DONATION_DATA.DONATION) ASC
LIMIT 10;
```

Wyoming	**Seldom**
Maine	**Yearly**
South Dakota	**Often**
North Dakota	**Never**
Alaska	**Daily**
West Virginia	**Weekly**
South Carolina	**Yearly**
New Hampshire	**Weekly**
Hawaii	**Seldom**
Montana	**Daily**

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JOB FIELDS BY STATES WITH HIGH DONATIONS

```
SELECT DONATION_DATA.JOB_FIELD, SUM(DONATION_DATA.DONATION)
FROM DONATION_DATA
JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID
WHERE DONATION_DATA.STATE = 'CALIFORNIA' OR DONATION_DATA.STATE = 'TEXAS'
OR DONATION_DATA.STATE = 'FLORIDA' OR DONATION_DATA.STATE = 'NEW YORK'
OR DONATION_DATA.STATE = 'VIRGINIA' OR DONATION_DATA.STATE = 'ILLINOIS'
 OR DONATION_DATA.STATE = 'DISTRICT OF COLUMBIA'  OR DONATION_DATA.STATE =
'TENNESSEE'
 OR DONATION_DATA.STATE = 'GEORGIA'  OR DONATION_DATA.STATE = 'OHIO'
GROUP BY DONATION_DATA.JOB_FIELD
ORDER BY SUM(DONATION_DATA.DONATION) DESC
LIMIT 10;
```

Product Management	**14,308**
Human Resources	**14,070**
Training	**13,633**
Research and Development	**12,246**
Business Development	**12,157**
Engineering	**12,020**
Sales	**11,878**
Marketing	**11,090**
Services	**10,767**
Support	**10,547**

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JOB FIELDS BY STATES WITH LOW DONATIONS

```
SELECT DONATION_DATA.JOB_FIELD, SUM(DONATION_DATA.DONATION)
FROM DONATION_DATA
JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID
WHERE DONATION_DATA.STATE = 'WYOMING' OR DONATION_DATA.STATE = 'MAINE'
OR DONATION_DATA.STATE = 'SOUTH DAKOTA' OR DONATION_DATA.STATE = 'NORTH DAKOTA'
OR DONATION_DATA.STATE = 'ALASKA' OR DONATION_DATA.STATE = 'WEST VIRGINIA'
OR DONATION_DATA.STATE = 'SOUTH CAROLINA' OR DONATION_DATA.STATE = 'NEW HAMPSHIRE'
OR DONATION_DATA.STATE = 'HAWAII' OR DONATION_DATA.STATE = 'MONTANA'
GROUP BY DONATION_DATA.JOB_FIELD
ORDER BY SUM(DONATION_DATA.DONATION) ASC
LIMIT 10;
```

Marketing	**101**
Training	**238**
Product Management	**268**
Services	**301**
Accounting	**322**
Engineering	**428**
Legal	**495**
Human Resources	**509**
Support	**601**
Sales	**617**

Insight vi

NUMBER OF UNIVERSITIES IN STATES WITH HIGH DONATIONS

```
SELECTCOUNT(DONOR_DATA.UNIVERSITY),
SUM(DONATION_DATA.DONATION),ROUND(AVG(DONATION_DATA.DONATIO
N),1)

FROM DONATION_DATA

JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID

WHERE     DONATION_DATA.STATE     =     'CALIFORNIA'     OR
DONATION_DATA.STATE = 'TEXAS'

OR DONATION_DATA.STATE = 'FLORIDA' OR DONATION_DATA.STATE =
'NEW YORK'

OR DONATION_DATA.STATE = 'VIRGINIA' OR DONATION_DATA.STATE =
'ILLINOIS'

OR  DONATION_DATA.STATE  =  'DISTRICT  OF  COLUMBIA'    OR
DONATION_DATA.STATE = 'TENNESSEE'

OR DONATION_DATA.STATE = 'GEORGIA'  OR DONATION_DATA.STATE =
'OHIO'

ORDER BY COUNT(DONOR_DATA.UNIVERSITY);
```

290	**140720**	**254**

Insight vii

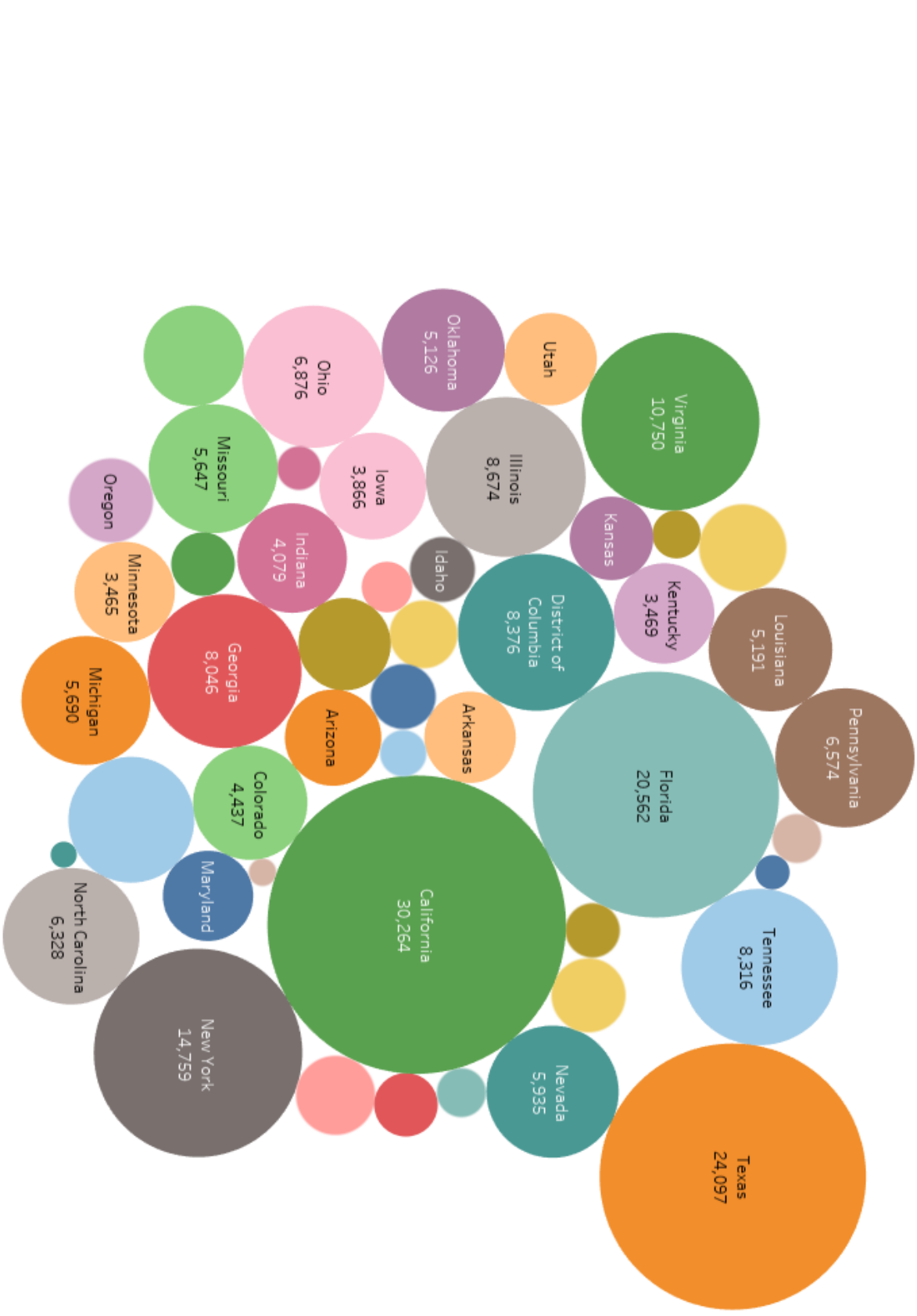
NUMBER OF UNIVERSITIES IN STATES WITH LOW DONATIONS

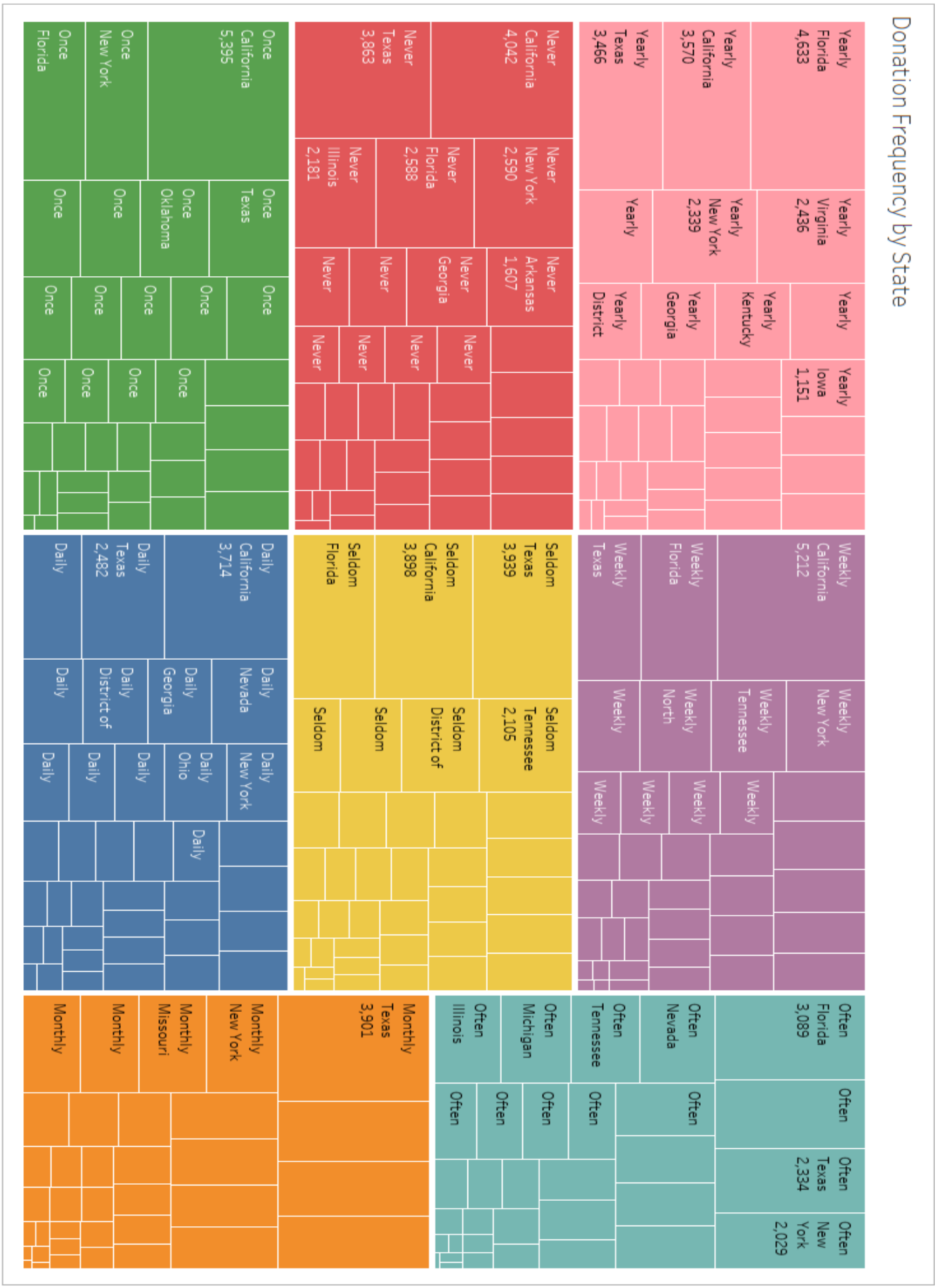
```
SELECT COUNT(DONOR_DATA.UNIVERSITY),
SUM(DONATION_DATA.DONATION),
ROUND(AVG(DONATION_DATA.DONATION),1)

FROM DONATION_DATA

JOIN DONOR_DATA ON DONATION_DATA.ID = DONOR_DATA.ID

WHERE  DONATION_DATA.STATE = 'WYOMING' OR
DONATION_DATA.STATE = 'MAINE'

OR DONATION_DATA.STATE = 'SOUTH DAKOTA' OR
DONATION_DATA.STATE = 'NORTH DAKOTA'

OR DONATION_DATA.STATE = 'ALASKA' OR
DONATION_DATA.STATE = 'WEST VIRGINIA'

OR DONATION_DATA.STATE = 'SOUTH CAROLINA'  OR
DONATION_DATA.STATE = 'NEW HAMPSHIRE'

OR DONATION_DATA.STATE = 'HAWAII'  OR
DONATION_DATA.STATE = 'MONTANA'

ORDER BY COUNT(DONOR_DATA.UNIVERSITY);
```

17 6355 211.8

Insight viii

VISUALIZATIONS WITH TABLEAU




Donation Frequency by State
Yearly Florida 4,633
Yearly Virginia 2,436
Yearly California 3,570
Yearly New York 2,339
Yearly Texas 3,466
Yearly
Yearly Kentucky
Yearly Georgia
Yearly District
Yearly Iowa 1,151
Never California 4,042
Never New York 2,590
Never Arkansas 1,607
Never Florida 2,588
Never Illinois 2,181
Never Texas 3,863
Never
Never Georgia
Never
Never
Never
Once California 5,395
Once Texas
Once Oklahoma
Once New York
Once Florida
Once
Once
Once
Once
Once
Once
Once
Once
Once
Once
Weekly California 5,212
Weekly New York
Weekly Florida
Weekly Tennessee
Weekly Texas
Weekly North
Weekly
Weekly
Weekly
Weekly
Seldom Texas 3,939
Seldom Tennessee 2,105
Seldom California 3,898
Seldom District of
Seldom Florida
Seldom
Seldom
Seldom
Daily California 3,714
Daily Nevada
Daily Texas 2,482
Daily Georgia
Daily District of
Daily
Daily
Daily Ohio
Daily
Daily
Daily
Daily New York
Daily
Daily
Often Florida 3,089
Often
Often Texas 2,334
Often New York 2,029
Often Nevada
Often
Often Tennessee
Often
Often Michigan
Often
Often Illinois
Often
Often
Monthly Texas 3,901
Monthly New York
Monthly Missouri
Monthly
Monthly


Donations by Job Fields
job_field
Human Resources
Research and Development
Product Management
Business Development
Engineering
Training
Accounting
Services
Support
Sales
Marketing
Legal
23,060
22,862
22,798
22,266
21,968
21,721
20,504
19,858
19,475
19,009
18,255
17,309
0K 1K 2K 3K 4K 5K 6K 7K 8K 9K 10K 11K 12K 13K 14K 15K 16K 17K 18K 19K 20K 21K 22K 23K 24K
donation

FINDINGS AND RECOMMENDATIONS

- California has the highest value of donations and number of donors
- Wyoming, Maine and South Dakota has the lowest donations and least number of donors.
- States with high value of donations and high number of donors donate recurrently (Yearly, Monthly, and Weekly).
- States with low value of donations and least number of donors do not donate recurrently (Seldom and Never).
- Majority of donors in States with high value donations have good paying jobs.
- A high number of donors in States with low value donations do not have good paying jobs.
- There is a high number of Universities in States with high value donations.
- There is a low number of Universities in States with low value donations.

CONCLUSION

From the analysis, **6,355 (4%)** of the donors were from the ten States with low donations. To increase the value of donations, the Charity should enable recurrent donations such as a monthly giving program as it provides a consistent, steady, predictable source of income.

Managing relationships with high-value donors should be a top priority, and in many cases, that requires a dedicated position to oversee major donor relationships.

From the analysis, **30 (5%)** of the donors were from the ten States with low donations. To increase the number of donors, the Charity should host Fundraising events in States with a low number of donors to provide an opportunity for donors and prospective supporters to engage with your cause.

From the analysis, **5%** of the branded Shirts were given to donors in the ten States with low donations. Putting in a little extra effort to create thank you gifts for donors' shows not just your biggest donors how that their support means to your organization but also those with low donations.

From the analysis, there is a low number of Universities in the ten States with low donations, resulting in donors not having good paying jobs. The Charity should apply for grants to build Institutions such as Universities and Vocational workshops in those States to enable job creation.

REFERENCE LINKS

You can view the SQL code and Tableau Visualisations by clicking the provided links.

- SQL Code

https://drive.google.com/drive/folders/1LWBoLPm8wPg4ss7aSkMnwa1LzlhkLQMT?usp=sharing

- Tableau Visualisations

https://public.tableau.com/views/DonationData_16350995882960/Dashboard1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link