Professional Background

I am a Data Analyst with an eight-month internship history at an EdTech company and a virtual experience platform. I've had the chance to learn about design thinking, data analytics, machine learning, and programming. As a tech enthusiast, I've participated in open-source projects, built interfaces with amazing teams under the guidance of professionals both locally and remotely, and met goals. I work hard to raise technology awareness in my community as well as to solve societal problems. Aiming to use my understanding to derive reasonable insight from data and improve companies' productivity.. I consider myself a positive addition to any value-driven organization with my experience in data analysis and data visualization.

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Introduction

As a data analyst working for the Education for All Charity Organization. I was tasked by the Head of Fundraising to present data on donor insight and donation rates in two weeks. I was provided with a dataset on donation and donor data where I need to present insight from the data to inform my fundraising strategy and increase both the value and frequency of donation as well as the number of donors.

To solve this problem, I proceeded to merge the two-dataset given to me and performed analysis using SQL.

I focused my analysis on certain features like:

i. state of residence of donors,
ii. gender,
iii. job field,
iv. frequency of donation.

The result obtained from the query include:

I analyzed the top 5 states with the highest donation both in value (sum) and count, there appeared to be a positive correlation with California topping the list followed by Texas, Florida, New York, and Virginia.

Also, it was worthy of note that there were more male donors than female donors.

In the area of Job_ field. They appeared to be more donors in the Human resources field.

Root Cause Analysis Process

Why is California the State with the highest donation?

From the query performed the count of donors for each state is directly proportional to the value of the donation. Hence, we can say that this is because of the number of donors (about 113) yielding a total sum of $30,264 donation.

It can also be observed that they are more males than females in California.

This trend of more male donors is also noticeable in the other top 4 states.

Why does California have the highest number of donors?

This could be linked to many factors like the population of individuals (employed) in California. Unfortunately, the data provided did not capture the following features leaving us with the option of seeking additional features.

Insights from the Analysis

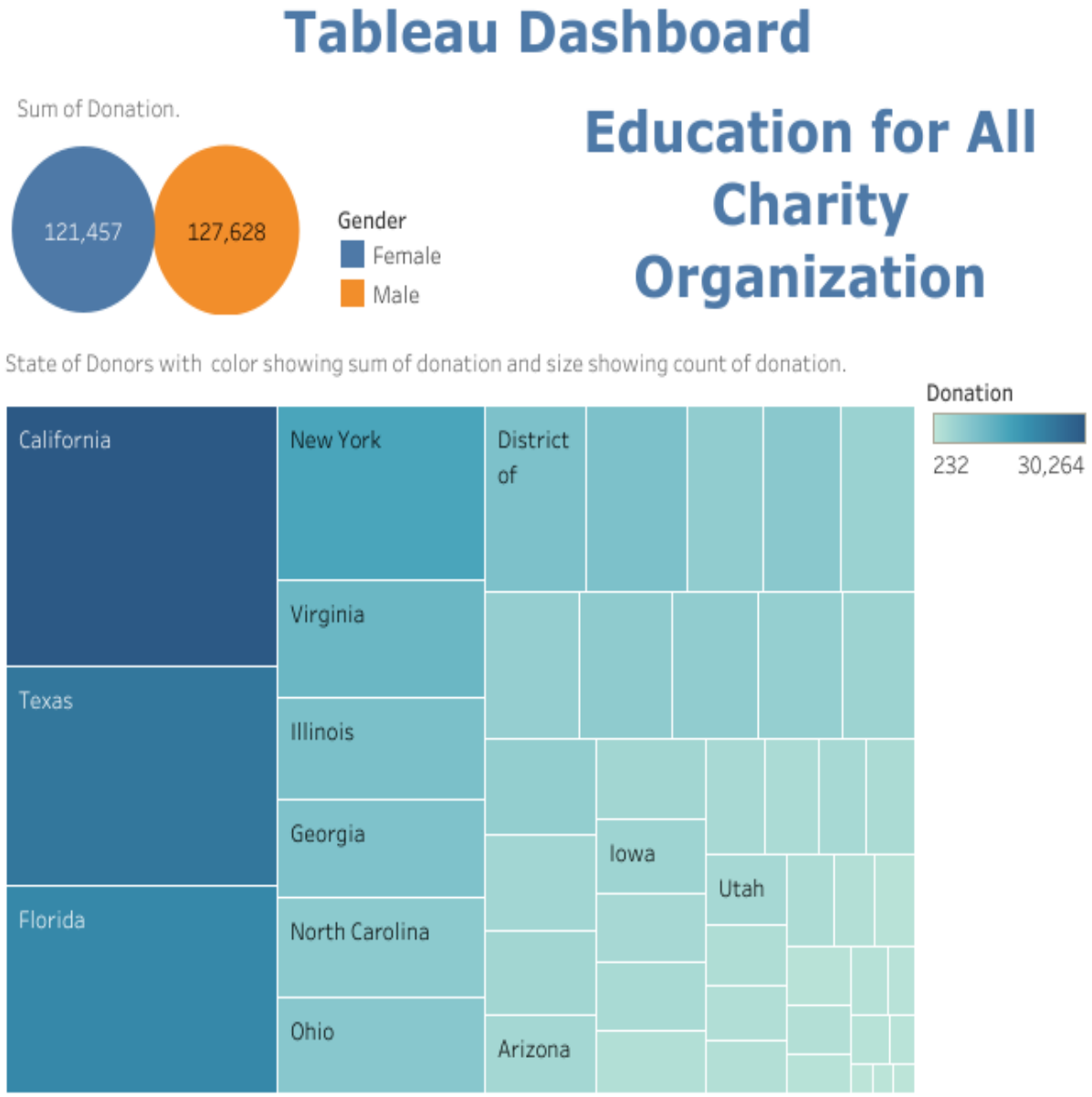
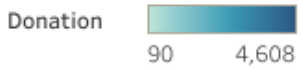


Tableau Dashboard 2



Sum of Donation broken down by top 5 Job Field with more donations vs. top 5 State with more donations

	Job Field				
State	Business Develo..	Engineering	Human Resources	Product Manage..	Research and De..
California	2,543	2,862	4,608	2,745	3,553
Florida	3,238	1,809	1,469	2,436	90
New York	568	724	966	2,308	2,555
Texas	2,784	1,568	1,710	1,291	1,338
Virginia	528	926	349	704	2,123

Count of Donation and Sum of donation broken down by Gender vs. Job Field.

	Gender			
	Count of Donation		Donation	
Job Field	Male	Female	Male	Female
Human Resources	51	42	13,376	9,68
Research and Development	41	43	12,340	10,52
Product Management	49	41	13,641	9,15
Business Development	45	49	12,492	9,77
Engineering	44	49	9,531	12,43
Training	36	48	10,383	11,33
Accounting	37	43	9,016	11,48
Services	45	35	12,253	7,60
Support	44	35	10,780	8,69
Sales	33	50	7,779	11,23
Marketing	30	44	7,525	10,73

Findings from SQL

1. Query to extract top 5 states with the highest donation

```
SELECT state, sum(donation), COUNT(donation)
FROM Donation_Data
JOIN Donor_Data
ON Donation_Data.id=Donor_Data.id
GROUP BY state
ORDER BY sum(donation) DESC
LIMIT 5;
```

state	sum(donation)	COUNT(donation)
California	30264	113
Texas	24097	95
Florida	20562	90
New York	14759	58
Virginia	10750	39

2. Query to extract top 5 job_fields with the highest donation

```
SELECT job_field, sum(donation)
FROM Donation_Data
JOIN Donor_Data
ON Donation_Data.id=Donor_Data.id
GROUP BY job_field
ORDER BY sum(donation) DESC
LIMIT 5;
```

job_field	sum(donation)
Human Resources	23060
Research and Development	22862
Product Management	22798
Business Development	22266
Engineering	21968

3. **Query to determine the gender with more donations**

```
SELECT gender, sum(donation)
FROM Donation_Data
JOIN Donor_Data
ON Donation_Data.id=Donor_Data.id
GROUP BY gender
ORDER BY sum(donation) DESC;
```

gender	sum(donation)
Male	127628
Female	121457

Findings and Recommendations

Findings

i. From the first Tableau Visuals, it can be noticed that they were more donations (value) from males compared to females even with the fact that female donors were more than male donors.
ii. Also, while trying to investigate why more donation was made in California, it was observed that the Human resources job field which happened industry with the highest donation was more in California (Tableau Dashboard 2).
iii. Lastly, as earlier noted, there's a positive correlation between the number of donors and the donations made. By implication of this, an increase in the number of donors will cause an increase in the value of the donation and vice-versa.

Recommendations

i. There should be a little focus on male donors as they tend to donate more than their female counterparts.
ii. Also, attention can be shifted to workers in the human resources industry as well as the other top 4 industries to raise more funds.

Conclusion

To strengthen the analysis, particularly to obtain the root cause, more features/data are needed for in-depth analysis.

Notwithstanding the few recommendations will also have their impact but limited.