REPORT FOR CHARITY ON EDUCATION FOR ALL

10Alytic internship Project

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Introduction

This project involves presenting data insight of currently received donations from different donors. Two

data sets from a charity organization (Education for All) were provided by the 10Alytic team, namely

‘Donation data’ and ‘Donor data’, both of which contain different pieces of information related to donors’ biodata and their donations.

In addition, the business problem is to devise strategies of increasing funds for Education for All charity

organizations, using the provided data. Specifically, the tasks include increasing the number of donors,

increasing the donation frequency, and the donation amount itself.

All data were imported into the SQL tool (sqliteonline.com) using Postgres IDE and were queried with different codes to

obtain insights necessary to increase donations. Importantly, wealth makers (real estates), business

tycoons, loyal donors (daily-weekly-monthly), and people with luxurious lifestyles (exotic cars) were

identified using various queries, while redundant and uneducated people who understand a second

language provided a complete insight into possible targets of donation increment. Gender did not make

any difference and donors were higher from certain states than others.

Results showed that a low level of education and ability to speak a second language negatively affected

donation. Almost all redundant donors did not have a university degree and consequently did not

understand why they should support the charity cause. In addition, most of them may have preferred to receive correspondence from the organization from their second language and therefore did not respond well to emails and honor invitations.

The fundraising team should consider sending emails to redundant donors in their second language.

Root Cause Analysis Process

Problem: Find ways of increasing donors, donation frequency, and amount for education

Why: Fewer donations, few donors, and redundancy in donation

Why: A language barrier, wrong audience, and lack of motivation

Why: Some donors understand a second language, have little education

Why: Nature of their work/business, successful in other careers, apart from education

Insight from Analysis

1. Total donors were 1000 of which 508 were females while 492 were males. The total sums of donations were calculated based on gender and it was found that a total of

$121457 (48%) donors were female, using the sequel code below, while male donors were

$127628 (52%) donors, making a total of $249085. The following SQL queries were used

Total donation and number of donations by gender

```
SELECT gender, SUM(donation), COUNT(donation)
 FROM "Donation_Data"
 GROUP BY gender;
```

gender	sum	count
Female	121457	508
Male	127628	492

Total donation amount

```
SELECT SUM(donation)
From "Donation_Data";
```

sum
249085

2. The total donations per state were estimated, and values were accessed in the SQL queries below

The top 10 states that donated the least (Fig.1) are Wyoming ($258), South Dakota ($401), North Dakota ($651), Alaska ($734), West Virginia ($793), South Carolina ($819), New Hampshire ($841), Hawaii ($875) and Montana ($1009). While the 10 states that donated the most (Fig. 2) are California ($30,264), Texas ($24097), Florida ($20562), New York ($14759), Virginia ($10750), Illinois ($8674), District of Columbia ($8376), Tennessee ($8316), Georgia ($8046) and Ohio ($6876) as shown below in Fig.1 and Fig. 2;

Top 10 States with least amount of donations

```
SELECT state, SUM(donation)
  FROM "Donation_Data"
  GROUP BY state
     ORDER BY SUM(donation)ASC
      LIMIT 10 ;
```

state	sum
Wyoming	232
Maine	258
South Dakota	401
North Dakota	651
Alaska	734
West Virginia	793
South Carolina	819
New Hampshire	841
Hawaii	875
Montana	1009

Fig.1

Top 10 States with the highest amount of donations

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

state	sum
California	30264
Texas	24097
Florida	20562
New York	14759
Virginia	10750
Illinois	8674
District of Columbia	8376
Tennessee	8316
Georgia	8046
Ohio	6876

Fig.2

3. Donors donated at different frequencies. The donation frequencies are; Once ($32,666), Weekly ($31,645), Daily ($29,249), Yearly ($35,266), Seldom ($30,650), Monthly ($26,870), Often ($28,476), and Never ($34,263).

Total donation by frequency of donation

```
SELECT SUM("Donation_Data".donation),"Donor_Data".donation_frequency
  FROM "Donation_Data"
   JOIN "Donor_Data"
    ON "Donation_Data".ID = "Donor_Data".ID
     GROUP BY donation_frequency;
```

donation_frequency	sum
Once	32666
Weekly	31645
Daily	29249
Yearly	35266
Seldom	30650
Monthly	26870
Often	28476
Never	34263

4. Total numbers of donors who work in one of the 12 different job fields. They are Business Development (94), Human Recourses (93), Engineering (93), Product Management (90), Training (84), Research & Development (84), Sales (83), Accounting (80), Services (80), Support (79), Marketing (74), and Legal (66)

Donors who work in Human Resources donated more money ($23,060) while those that work in Legal ($17309) donated the least. Fig. 3

```
SELECT job_field, SUM(donation), COUNT(donation)
  FROM "Donation_Data"
     GROUP BY job_field;
```

job_field	sum	count
Marketing	18255	74
Training	21721	84
Product Management	22798	90
Research and Development	22862	84
Business Development	22266	94
Sales	19009	83
Support	19475	79
Legal	17309	66
Accounting	20504	80
Services	19858	80
Human Resources	23060	93
Engineering	21968	93

Fig. 3

5. Over ~50% (586) of the total numbers of donors donated over $200 with a total donation of $205,892 and ~41% (411) of donors donated less than $200 with a total donation of $24,593 while ~1% (3) donors donated $200 with a total donation of $600.

```
SELECT SUM(donation), COUNT(donation)
   FROM "Donation_Data"
    WHERE donation >$200;
```

Fig. 4

sum	count
205892	586

```
SELECT SUM(donation), COUNT(donation)
   FROM "Donation_Data"
    WHERE donation <$200;
```

Fig.5

sum	count
42593	411

```
SELECT SUM(donation), COUNT(donation)
  FROM "Donation_Data"
   WHERE donation = $200;
```

Fig.6

sum	count
600	3

6. Donation by donors' car. Top 10 cars driven by donors that made the highest donation are; Ford ($22,706), Chevrolet ($19,875), Toyota ($14,123), GMC ($10,145), Mitsubishi ($10,001), Dodge ($9,479), Pontiac ($9,331), Honda ($9,201), Honda ($9,201), Volkswagen ($8,964) and BMW ($8,608).

```
SELECT "Donor_Data".car, SUM("Donation_Data".donation)
  FROM "Donation_Data"
   JOIN "Donor_Data"
    ON "Donation_Data".id = "Donor_Data".id
     GROUP BY "Donor_Data".car
       ORDER BY SUM("Donation_Data".donation)DESC
        LIMIT 10;
```

car	sum
Ford	22706
Chevrolet	19875
Toyota	14123
GMC	10145
Mitsubishi	10001
Dodge	9479
Pontiac	9331
Honda	9201
Volkswagen	8964
BMW	8608

7. Donors who speak a second language by donation frequency.

```
SELECT "Donor_Data".donation_frequency, COUNT("Donor_Data".second_language),
SUM("Donation_Data".donation)

  FROM "Donation_Data"

   JOIN "Donor_Data"

    ON "Donation_Data".id = "Donor_Data".id
```

```
GROUP BY "Donor_Data".donation_frequency
ORDER BY COUNT("Donor_Data".second_language)DESC;
```

donation_frequency	count	sum
Never	54	34263
Weekly	46	31645
Daily	46	29249
Yearly	41	35266
Once	40	32666
Seldom	39	30650
Often	35	28476
Monthly	32	26870

Findings and Recommendations

There is a direct relationship between the ability to speak a second language and the value/frequency

of donation. Donors who could speak a second language probably preferred the second language to the first, and thus did not respond to emails or invitations to charity donations. Their job fields cut across many sectors and thus if they are in a country different from where the charity organization is situated and where another language they understand is spoken, there is a tendency

that they will not respond to emails and invitations.

It is, therefore, necessary for the charity organization to provide translation tools within the email for clients who may prefer to read their letters in a second language

More email marketing strategies and physical representation are needed in states that recorded low donations. This will increase the donations received. In addition, more programs

should be organized for loyal donors, who share the vision of the charity organization and donate daily, weekly, monthly, and yearly basis. Gift items should also be presented to them to show appreciation and renew their commitment.

Conclusion

The data shows that ability to speak a second language and a low level of education can negatively affect the frequency and value of donations received.