

Can image analytics help fundraisers?

— Jiachao Fang, Hanning Su, Yuchong Xiao,
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How could images influence the result of a fundraising project?

[Trending](#) [Personal](#) [NonProfit](#) [Category ▾](#) [By friends](#) [Near you](#)




Help Give Healing Legs
by Marley's Mutts Dog Rescue
📍 Bakersfield, US
Our sweet girl needs your help to walk toward a better future!

\$2.7k Raised
4 Days running




Vancouver Sun Children's Fund Adopt-a-School 2017
by The Vancouver Sun Children's Fund
📍 Vancouver, CA
Help keep our kids fed, warm

\$22.7k Raised
16 Days running



J20 Legal Defense Donations
by DCLP
📍 Washington, DC, US
Support the 200 people facing multiple felony charges after being mass arrested during protests at the inauguration. In

\$48.6k Raised
36 Days left



Support Yule Duel 2017 - Carolling for a Cause
by KPMG Caroling Crew
📍 Vancouver, CA
Yule Duel brings together choirs from across the Lower Mainland to sing Christmas carols loud and proud from the sidewalks of

\$1.4k Raised
42 Days running

Data Source

<https://fundrazr.com/find?category=Non-profits>

1

Vancouver Sun Children's Fund Adopt-a-School 2017

2



3

\$22,075 raised

4

6% of \$359.6k goal

5

126 contributors

6

16 days running

7

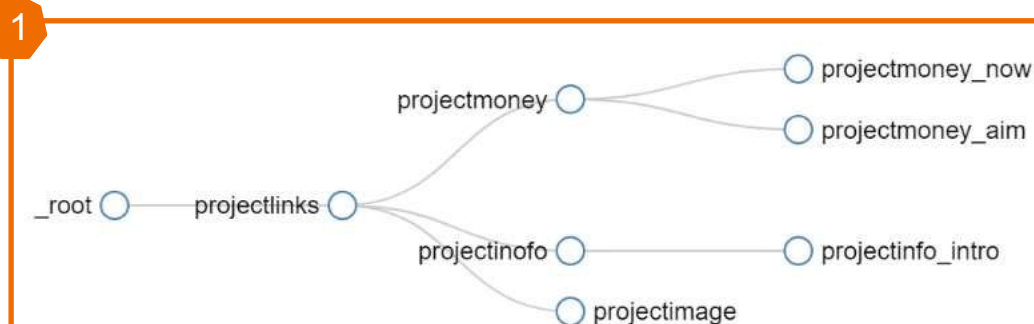
Help keep our kids fed, warm and learning. Your donation will change the lives of thousands of school children in Metro Vancouver and beyond, coming to school unfed, improperly dressed and suffering the psychological effects of living in poverty.

Contribute

- 1 Project Title
- 2 Project Image
- 3 Money Raised
- 4 Goal
- 5 Numbers of Donators
- 6 Duration
- 7 Project Description

Data Collection

Chrome Extension: Web Scraper



1 Build the sitemap

2 Collect the data (6k)

2

Project Title	Money Raised	Goal	Project Description	Image Url
2017 Round the Rock: Strong Against	\$485	\$50,000	You can donate directly or create	https://d30pl5hav4s8uw.cloudf
EIJI IS AT THE ER VET! PLEASE HELP	\$540	\$2,000	Last night, Allen Szykula's rece	https://d30pl5hav4s8uw.cloudf
Dissection Connections-Understandi	\$500	\$500	\$100 will go to replace our dull	https://d30pl5hav4s8uw.cloudf
Cambodian Charity Organization	\$223	\$100,000	At the centre of Cambodia' s deve	https://d30pl5hav4s8uw.cloudf

Data Preprocessing

Google Cloud Vision & Python



Dog Like Mammal	96%
Dog	96%
Dog Breed	94%
Dog Breed Group	91%
Puppy	85%
Morkie	83%



Face	95%
Child	95%
Nose	89%
Head	86%
Cheek	84%
Eye	78%

Image URL



```
def getLabels(url):  
    imageName = "aa.jpg"  
    urllib.urlretrieve(url, imageName)  
    with io.open(imageName, 'rb') as image_file:  
        content = image_file.read()  
    client = vision.ImageAnnotatorClient()  
    image = types.Image(content=content)  
    responseLabel = client.label_detection(image=image)  
    labels = responseLabel.label_annotations  
    imageLabels = []  
    for label in labels:  
        imageLabels.append(label.description)  
    imageLabels = ",".join(imageLabels)  
    return imageLabels
```



Image Labels

Data Processing & Analysis

Data Cleaning: delete incomplete and noisy data

Linear Regression: use **Money_Raised/Goal(%)** as the dependent variable

TF-IDF Score Calculation: set three independent variables

- TF-IDF scores of project description
- TF-IDF scores of image labels
- TF-IDF scores of project description and image labels

Results

Keyword	dog	breed	mammal	cat	girl	child	community	logo	sport
TF-IDF	0.0456	0.046	0.0393	0.0548	0.0719	0.0721	0.0657	0.0688	0.0563

Independent Variables ↵	TF-IDF scores of description words↵	TF-IDF scores of image tags↵	TF-IDF scores of description and image tags↵
Dependent Variables ↵	\$raised/\$goal↵	\$raised/\$goal↵	\$raised/\$goal↵
Accuracy ↵	72.50%↵	63.19%↵	73.26%↵

Insights

- Some themes like pets and children will get more attention
- People should combine both the project description and images to raise more money

Defections

- The impact of duration has not been taken into consideration
- Not enough data for sentiment analysis about people's review

THANK YOU

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