

CityKitty

Experiment on Animal
Charity Donator Behavior

Group 10

Apurva Tawde Chenyang Liu Mengyuan Lin Yan Feng





BUSINESS CONTEXT

BUSINESS DECISION

Since winter is coming soon, it would be hard for street cats to survive. To make their life easier in this winter, we plan to raise a fund for them through the project.

Moreover, we hope this project can give some marketing insights on the effects of different picture displays by using A/B testing. Therefore, in the future, the display with a better result can be used in a wider range.



LEARNING OBJECTIVE

The image shows a grid of six GoFundMe campaign cards, each featuring a different cat-related cause:

- PARKLAND, FL**
JS Perry-Cat Artist Won't...
I am Jamie Perry's sister, Claudia & I am currently d...
Last donation 2w ago
\$38,275 raised of \$50,000
- LLANARTH, WALES, UNITED ...**
Sharon's campaign for GC...
Funds go to Greek Cat Welfare Society
Last donation 3d ago
£350 raised of £350
- WEST BABYLON, NY**
Care for Cats
I hate doing this, but unfortunately I'm kinda in ...
Last donation 5d ago
\$23,038 raised of \$30,000
- FRANKFORT, KY**
Save Dean the Cat
A few weeks ago, my 3 year old cat, Dean, started to lim...
- GREENSBORO, NC**
Sheets Feral Cat Fund
CLICK ON "UPDATES" TO SEE MOST RECENT STORI...
- BROOKLYN, NY**
Save the Cats of South Slope
I relocated from Upstate New York to New York City ...

When viewing GoFundMe website for more information on the donation page for cats, we notice that there some people chose only the cat in the image to attract donators, while others chose an image showing the interaction between cat and human to attract donators. Hence, we think it would be interesting and meaningful to test the effect of the two kinds of image.

LEARNING OBJECTIVE: Will a picture showing interaction between cat and human would have an impact on the conversion rate and the donation amount.



EXPERIMENT DESIGN

7 KEY QUESTIONS

TREATMENTS:

Control ad theme - only a cat

Treatment ad theme - a cat interacting with human

SAMPLING/SUBJECTS:

Convenient sample - randomly choosing Facebook users with interest in animals with Facebook A/B testing tool.

SETTING:

Field test targeting Facebook users

SAMPLE SIZE: 19,964

Assume the click rate is 5%, we want to detect a 1% difference.

RESPONSE MEASURE:

Clicks of the links that direct the users to the donation page; Also, the donation amount raised from each group

ASSIGNMENT:

Randomized assignment. Users would be assigned to either the control or treatment group randomly.

UNIT-OF-ANALYSIS: user - day



EXPERIMENT DESIGN

CONFOUND AND THREAT

i.e. Although the interaction is shown in picture A, people may be attracted by the Persian cat in picture A than the American short cat in picture B. Hence, the difference would depend on the cat breed than the interaction.

i.e. People may click the ad because the model is cute, rather than liking the interaction.

Charity Selection, Cat Breed, Time

Different charity organization, cat breed or experiment time would lead to accidental bias.

Image of the model

People may click/donate more due to the model in the picture because of race or gender, rather than liking the interaction.

Solution

To avoid these lurking variables, we will keep all the elements except the tested element the same.

Solution

To minimize the possible influence, the model will wear a neutral clothes and hold the cat in arms without showing full body.

A/B Testing



Find Loving Home for Animals

Sponsored • 0

Winter is Here! Freezing temperatures have already set new record-low in some regions. The animals need a loving home! Want to join... Continue Reading



GOFUNDME.COM

Tap to make Donations!

Chenyang Liu Find Loving Homes for...

Learn More

...



Find Loving Home for Animals

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Winter is Here! Freezing temperatures have already set new record-low in some regions. The animals need a loving home! Want to join... Continue Reading



GOFUNDME.COM

Tap to make Donations!

Mengyuan Lin Find Loving Homes for...

Learn More

...

Find Loving Homes for Animals!



Chenyang Liu is organizing this fundraiser on behalf of
Philadelphia Animal Welfare Society (PAWS). 
Donations are 100% tax deductible.

Created November 15, 2019

 Animals & Pets

The Winter is Here

Freezing temperatures have already set new record-low in some regions. The animals need a loving home! Want to join us? We are raising money to help the animals. Any donation will help make an impact. Thanks in advance for your contribution to this cause that means so much to these animals.

\$1,000 goal

[Donate now](#)

[Share](#)

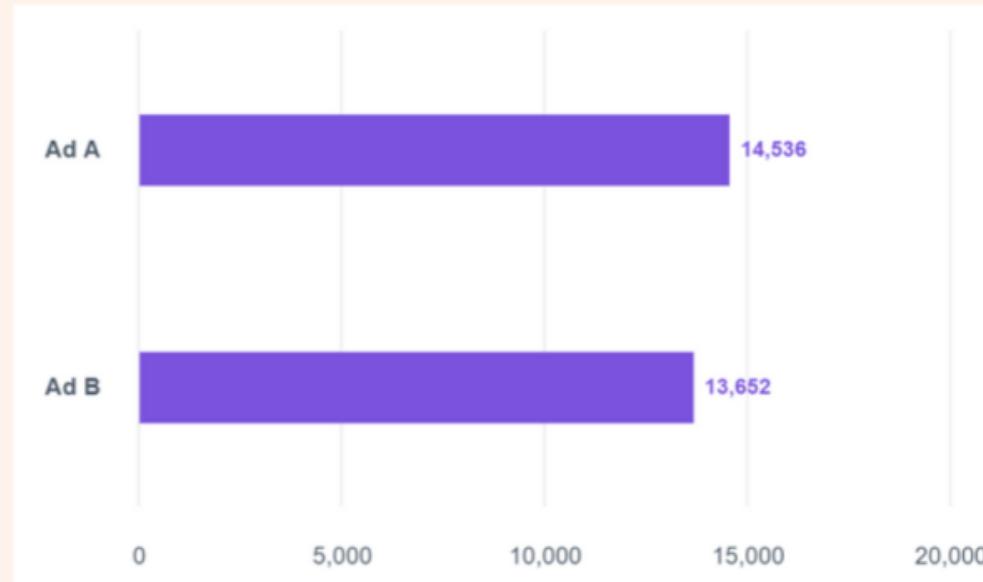
No donations yet. Be the first to help.

Both of the two version will link to a website with the same display to keep all the other elements the same.



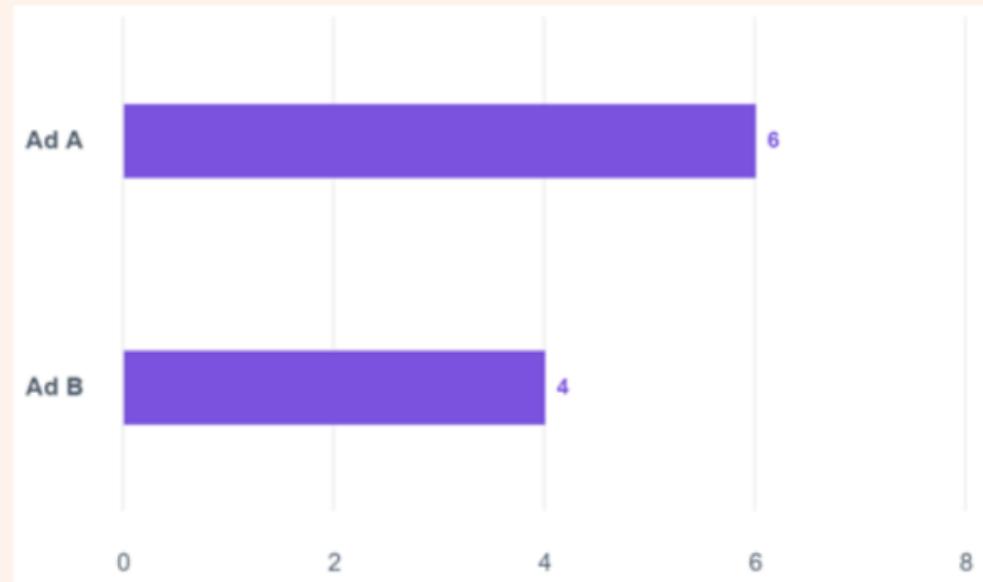
RESULTS AND CONCLUSION

REACH



Our experiment containing 2 ads reaches 28188 people in 4 experimental days, 14536 for Ad A (with picture only showing cat) and 13652 for Ad B (with picture showing interaction between cat and human).

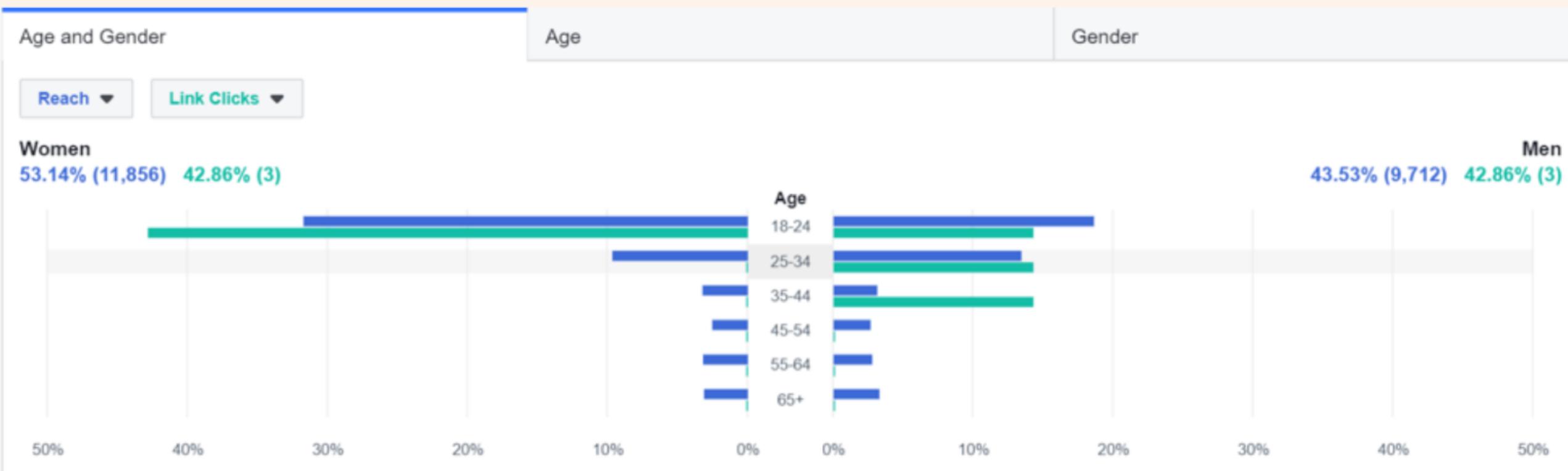
CLICK



Among people who reach the ads, only 10 of them click the link, and 6 for Ad A while 4 for Ad B.

REACH AND CLICK BY AGE AND GENDER

In terms of gender and age, 6 out of the 10 clicks we got were trackable.



According to the graph, we can know although ad reaches women more than man, the click rates of both genders are the same. Therefore, gender alone may not affect response (click) rate. When we considering both gender and age together, we can find that women at age of 18-24 may be more likely to click the link than man, and men at 25-44 are more likely to response than women. Which may indicate that, to save the budget by a better targeting strategy, we may be able to get more click if we target men at 25-44 and women at 18-24.

CONFIDENCE INTERVAL

Whether there is a significant difference on the click rate between Group A and Group B?

Group A = 0.0408%

Group B = 0.0287%

Confidence Interval = (-0.0003177891, 0.000557331)

There is no significant difference.

BAYESIAN ANALYSIS

Beta-Binomial Model for Binary Data		
Data	A	B
success	6	4
n (trials)	14536	13652
Priors	A	B
alpha	1	1
beta	1	1
Posterioris	A	B
alpha	7	5
beta	14531	13649
Credible Intervals (95%)		
Low	0.000	0.000
High	0.001	0.001
Posterior Probabilities		
P(pA>pB)		0.699
Prob(pA>?)	0.500	0.000
Prob(pB>?)	0.500	0.000

The chance that the picture with only a cat has a higher click rate is 0.699.

CONCLUSION

The result shows that there is no significant difference. It doesn't matter what kind of image we choose. If we have to choose one of them, then we would choose the picture with only a cat because it has a higher chance for a higher click rate.



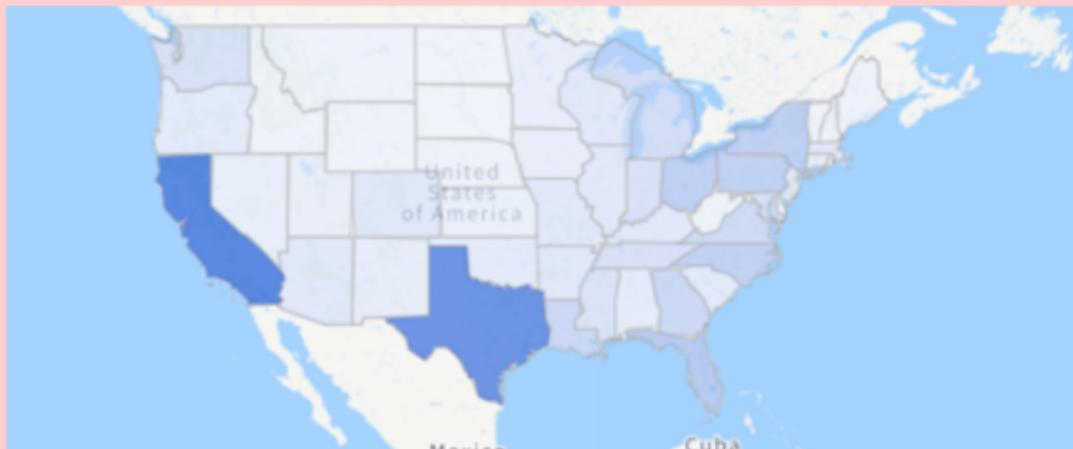
LESSONS LEARNED

LESSONS LEARNED

IMAGE TO USE

1

Using only the cat's image in the picture would attract more people to view the donation website.



Although assigned randomly, there are much more Facebook users from California and Texas.

PLATFORM TO CHOOSE

2

Facebook Ad may not be a good platform to choose. It is hard to find the potential donator with random selecting on it.



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I am Jamie Perry's sister,
Claudia & I am currently d...

Last donation 2w ago

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Sharon's campaign for GC...

Funds go to Greek Cat
Welfare Society

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Care for Cats

I hate doing this, but
unfortunately I'm kinda in ...

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Many donation requests launched at almost the same time as ours got a large amount of donation. This may indicate that they reached much more people than we did, or they used a better targeting strategy and found the right segmentation to target.

A circular inset photograph showing two cats sleeping on a bed. One cat is white with black spots, and the other is brown and white. They are lying close together under a light-colored blanket.

THANK YOU

PLEASE FEEL FREE TO ASK QUESTIONS



Apurva Tawde

Facebook A/B Testing
Data Analysis



Chenyang Liu

Presentation
Website Design



Mengyuan Lin

Website Design
Experimental Design



Yan Feng

Experimental Design
Data Analysis