



CAT-EGORIZING INSTAGRAM LIKES

Bauer Mcclave





OBJECTIVES

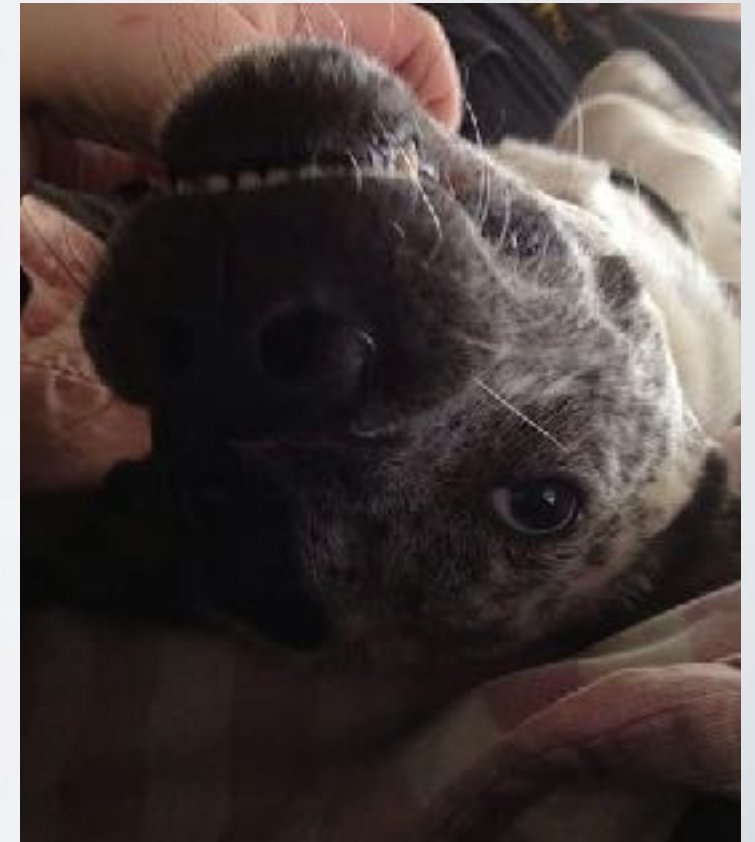
Predict whether a
photo will receive

Above Average

or

Below Average

Likes on Instagram



USE CASES

- Popular Instagram accounts:
 - Build a following
 - Gain sponsorships
 - Become a brand



Gund Grumpy Cat Mini Plush (Birthday), 4"

by GUND

\$12⁶⁵ ✓Prime

Get it by **Monday, Mar 27**
FREE Shipping on eligible orders

More Buying Choices
\$7.60 (10 new offers)

★★★★☆ = 150

Manufacturer recommended ages 1 - 5 Years

Product Description

... Grumpy Cat mini is wearing a bday hat-loop on head to attach to memo ...



Grumpy Cat: A Grumpy Book Jul 23, 2013

by Grumpy Cat

Hardcover

\$9⁵⁷ \$12.95 ✓Prime

Get it by **Monday, Mar 27**
FREE Shipping on eligible orders

More Buying Choices
\$0.25 (254 used & new offers)

★★★★☆ = 521

Kindle Edition

\$7⁹⁹



T-Line Men's Grumpy Cat Nope Graphic T-Shirt

by Animowild

\$11¹⁰ - \$18²³ ✓Prime

FREE Shipping on eligible orders
Some sizes/colors are Prime eligible

★★★★☆ = 125

Product Features

Grumpy Cat Nope Men's Heather Blue T-Shirt S

TOOLS USED





PIPELINE

- Data
 - From Instagram and Imgrum scraped
 - 63 cat accounts for 80,521 photos
 - 63 dog accounts for 76,831 photos

• Image Captioning with RNNs

• Convolutional Neural Network to predict photo quality



PIPELINE

- Data
 - From Instagram and Imgrum scraped
 - 63 cat accounts for 80,521 photos
 - 63 dog accounts for 76,831 photos
- Labeling Good and Poor photos

How can we use this data to improve photo quality?

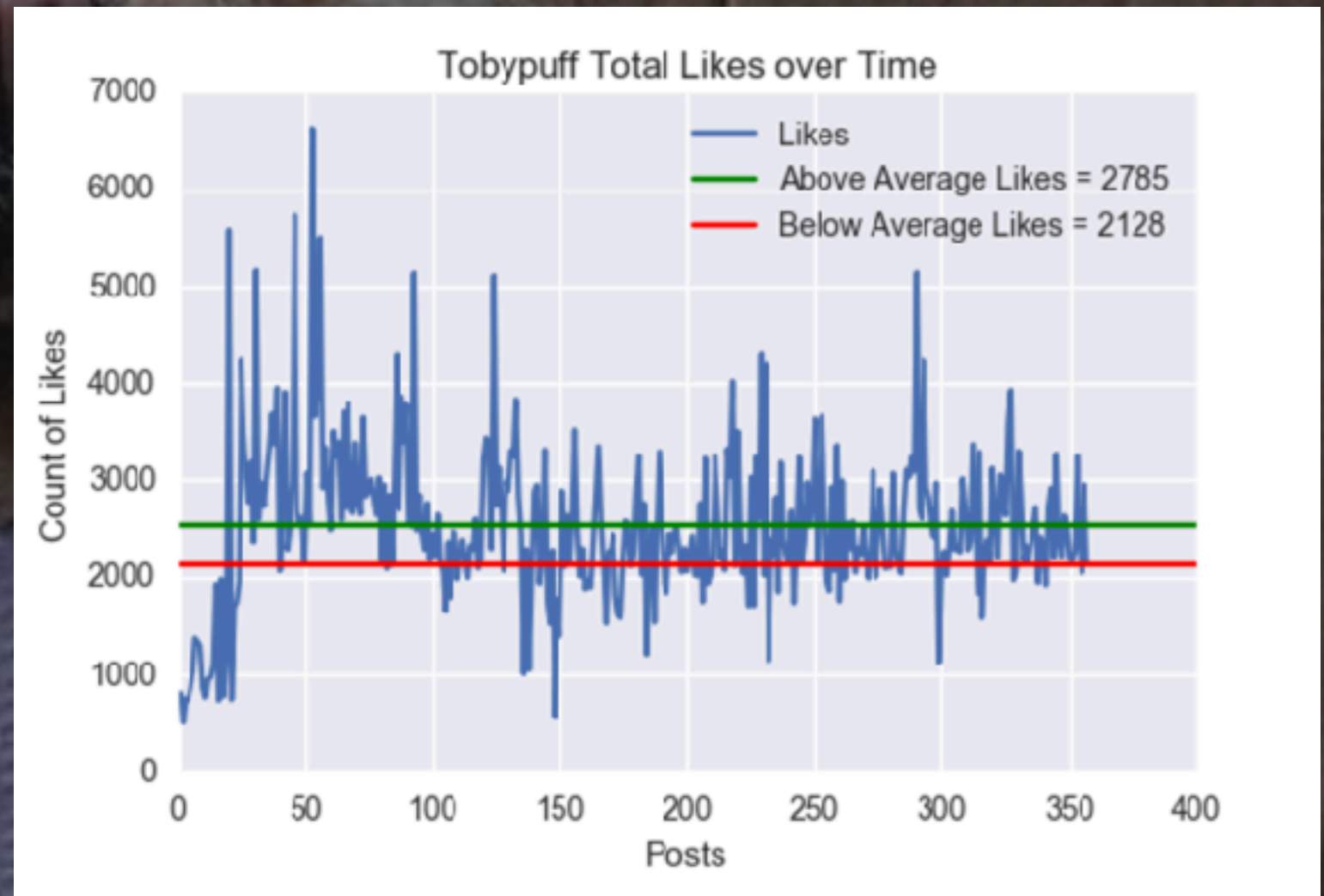


PIPELINE

- Data
 - From Instagram and Imgrum scraped
 - 63 cat accounts for 80,521 photos
 - 63 dog accounts for 76,831 photos
- Labeling Good and Poor photos
- Convolutional Neural Network to predict photo quality

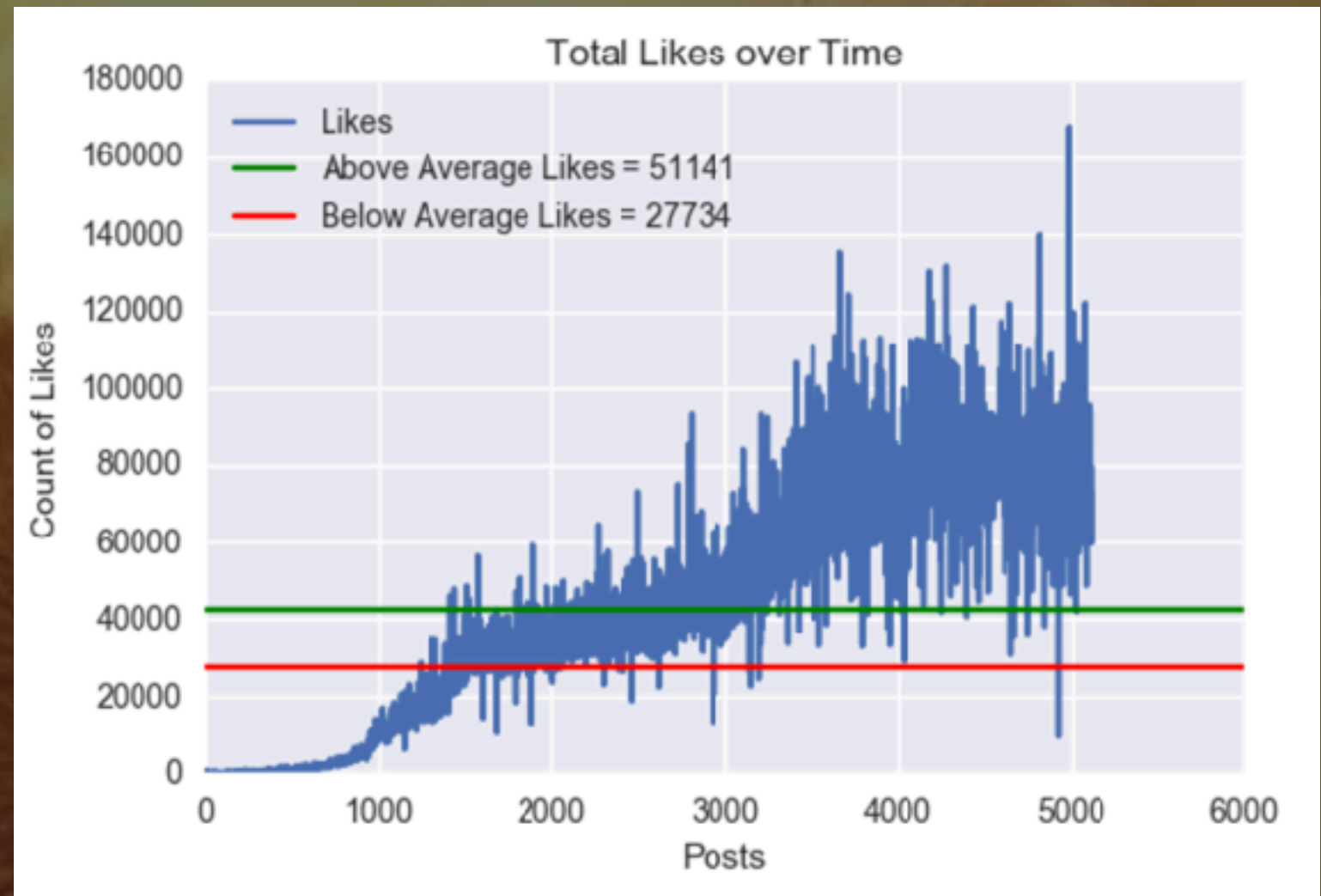
METHOD

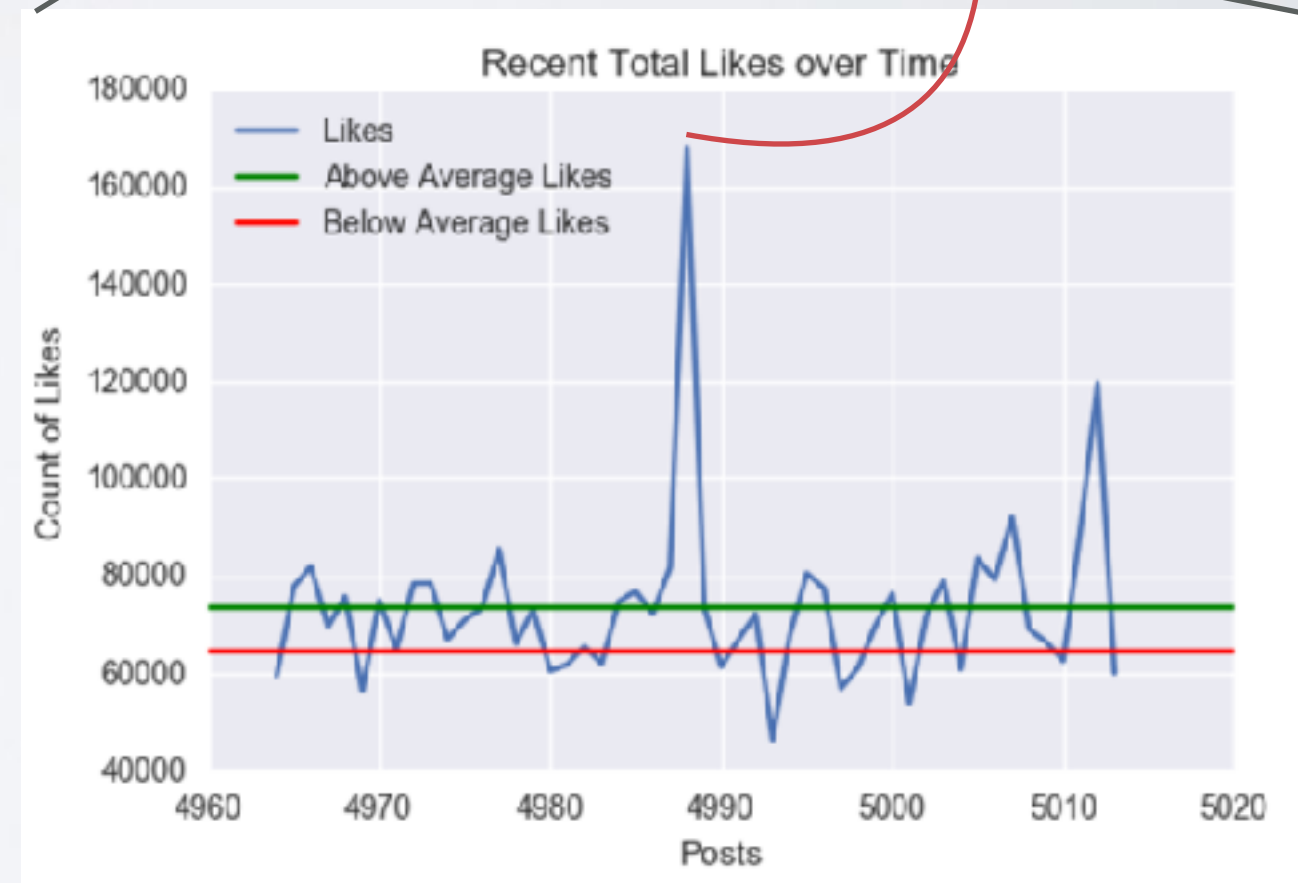
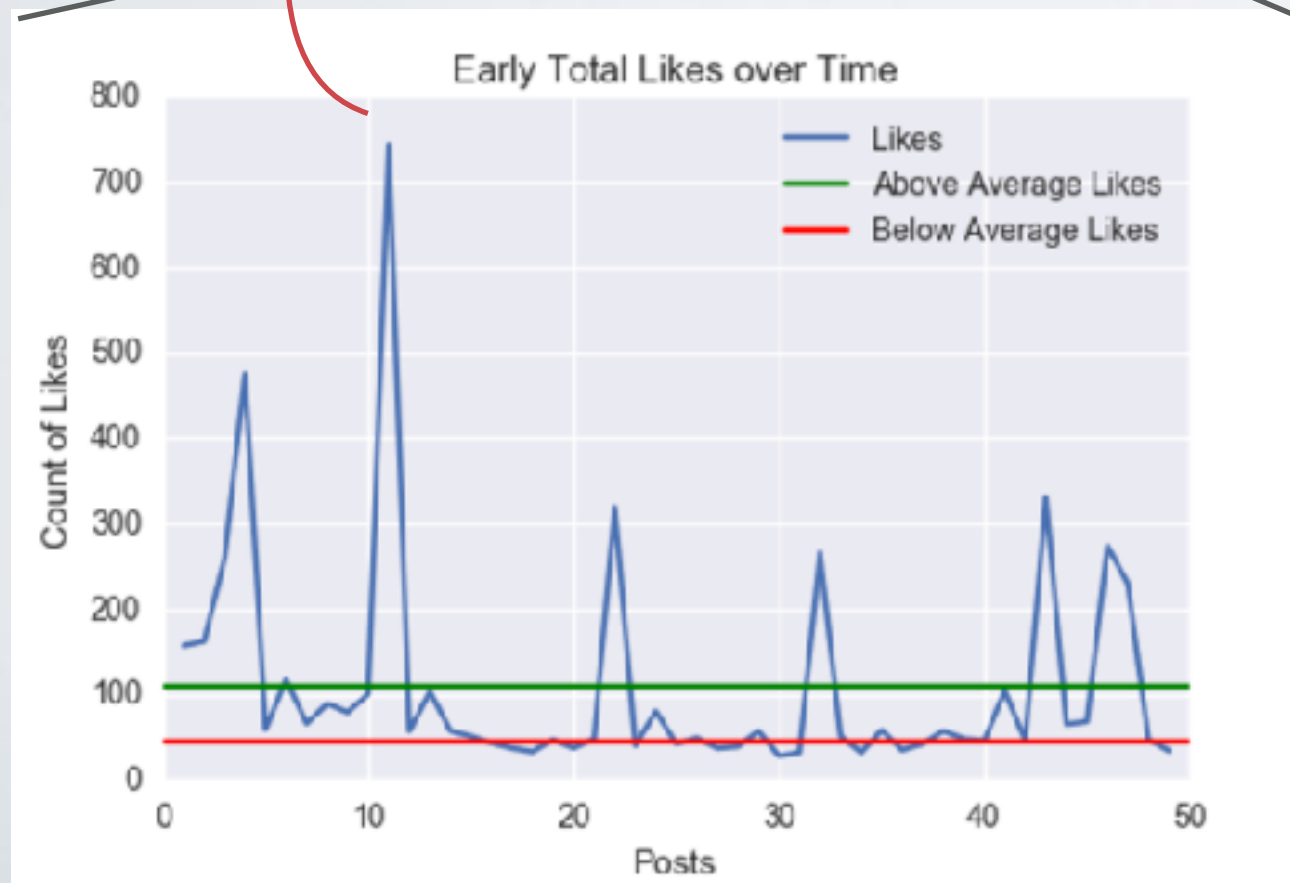
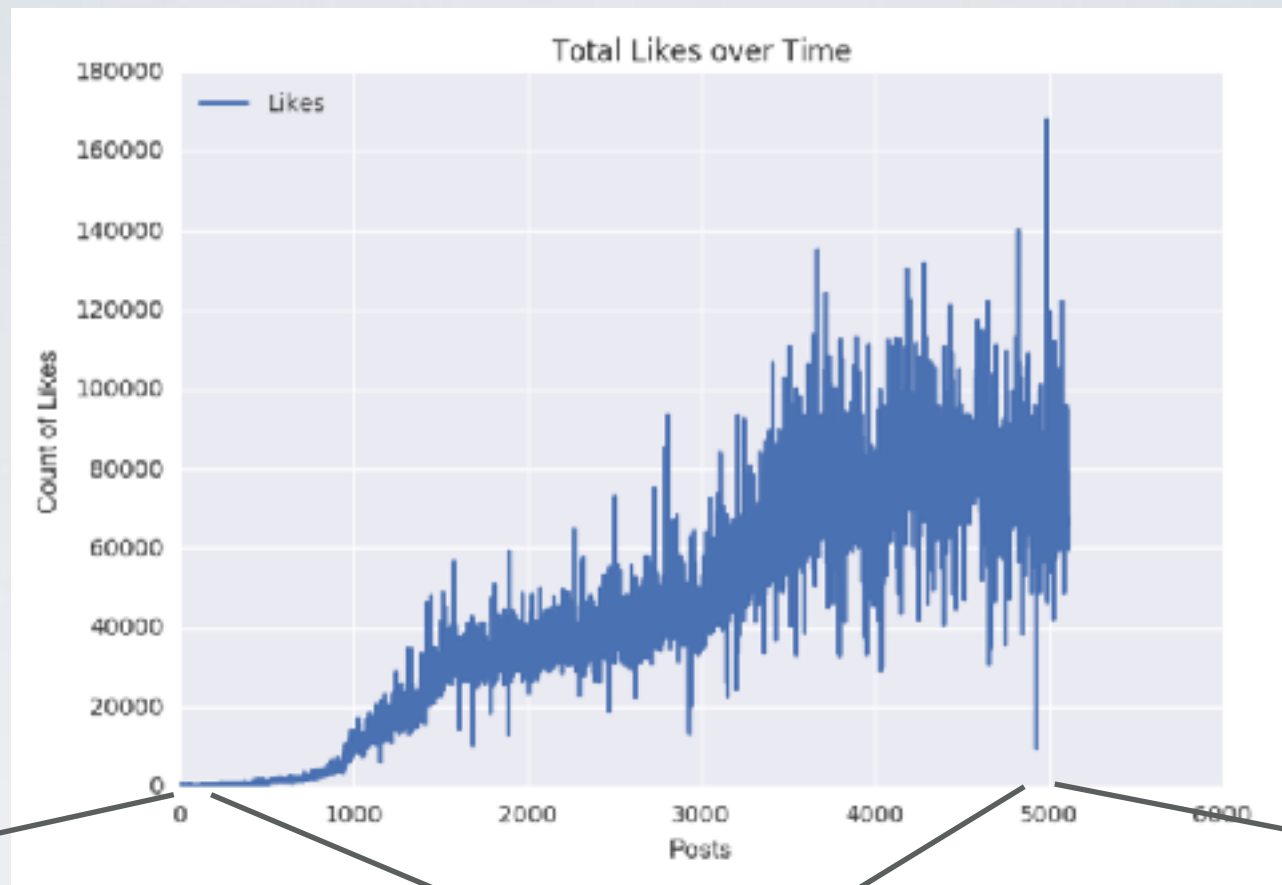
- **Label above and below average photos over the history of a user's posts**



METHOD

- **Mean for all posts does not work for users building a following over time**





METHOD - CNN

- Convolutional Neural Net
- Keras & Tensorflow
- VGG16 pre-trained with Imagenet
- Dense fully connected layers added on top
- Accuracy:
- Cats - 0.66 & 0.66
- Dogs - 0.70 & 0.65

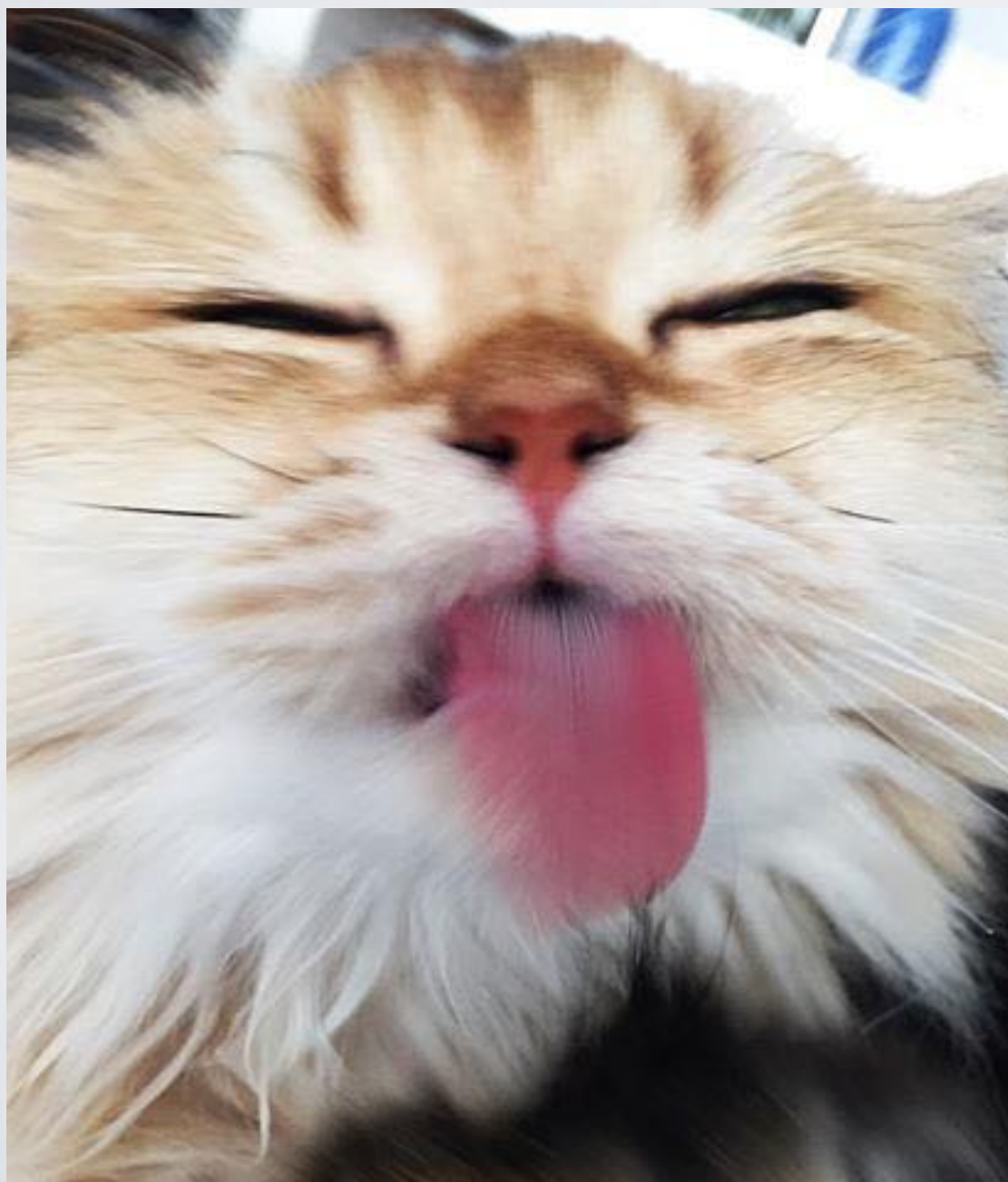


Layer (type)	Output Shape	Param #
image_input (InputLayer)	(None, 256, 256, 3)	0
vgg16 (Model)	multiple	14714688
flatten (Flatten)	(None, 32768)	0
fc1 (Dense)	(None, 4096)	134221824
fc2 (Dense)	(None, 4096)	16781312
predictions (Dense)	(None, 1)	4097

Total params: 165,721,921.0
Trainable params: 165,721,921.0
Non-trainable params: 0.0

CNN CONSENSUS

- Good Cat Pictures



CNN CONSENSUS

- Good Dog Pictures



CNN CONSENSUS

- Bad Cat Pictures



CNN CONSENSUS

- Bad Dog Pictures



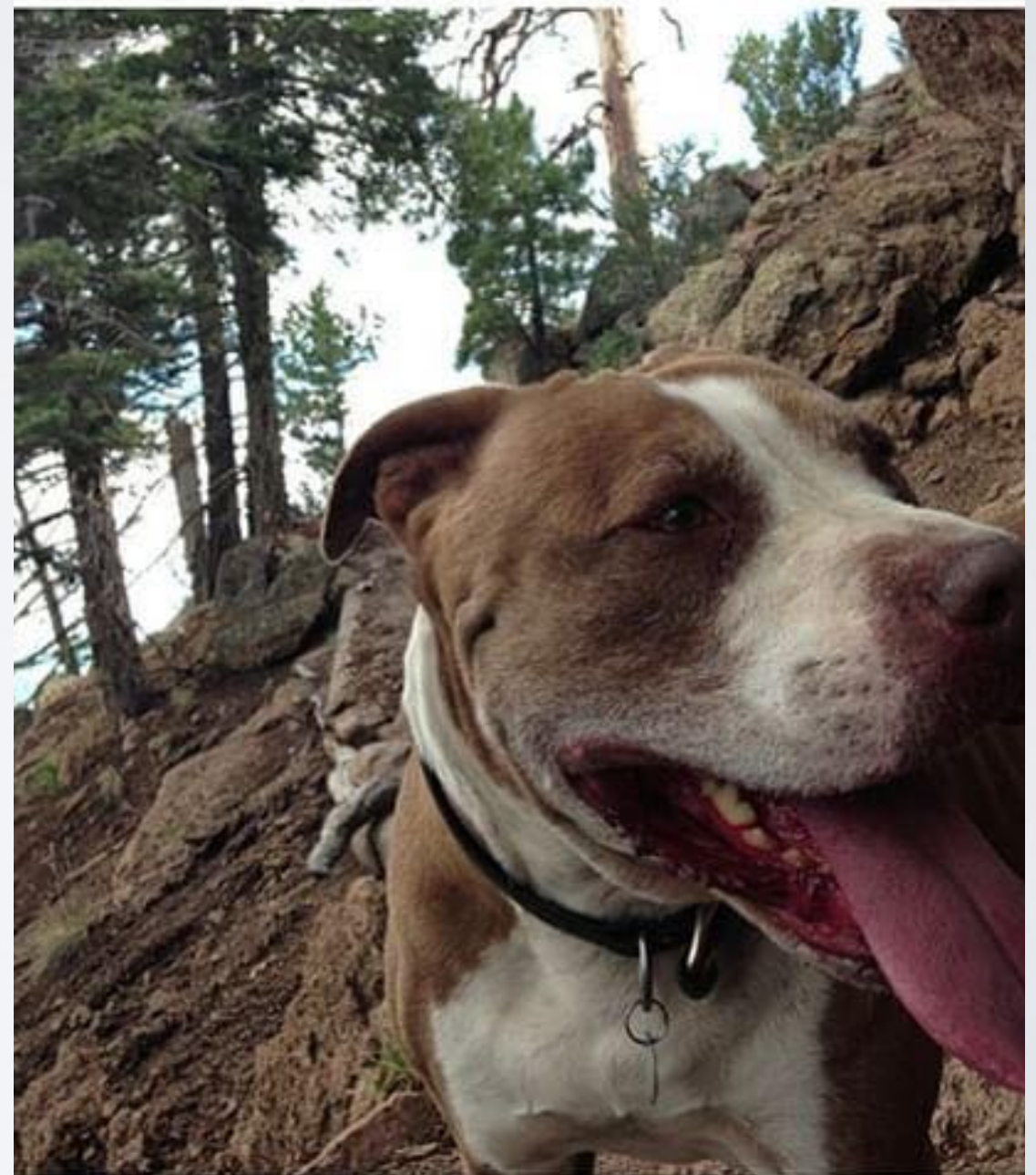
CNN MISHAPS

- High Likes Rated as Poor Photos



CNN MISHAPS

- Low Likes Rated as Good Pictures



UNDervalUED ON INSTAGRAM?

- Labeled below average, CNN classified above average



APPLICATIONS

- Find high quality photos to post on Instagram
 - Choose between photos
 - Predict most likes possible
 - Find on brand photos





Find tacos, cheap dinner, Max's

Near New York, NY, US



Sign Up

FURTHER APPLICATIONS

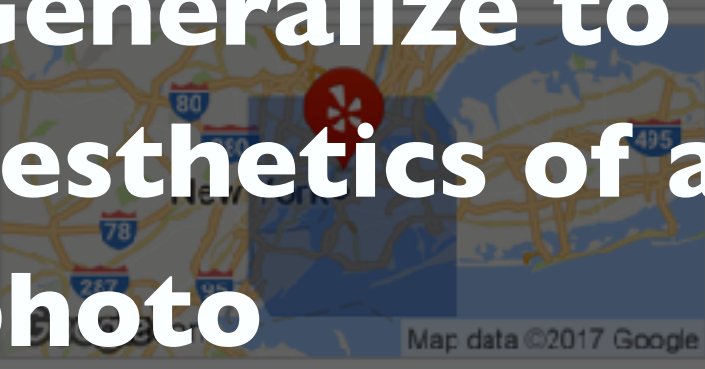
Pooch Pals ✓ Claimed



33 reviews

Details

Dog Walkers, Pet Boarding/Pet Sitting, Pet Training



Serving New York and surrounding area

552 6th Ave

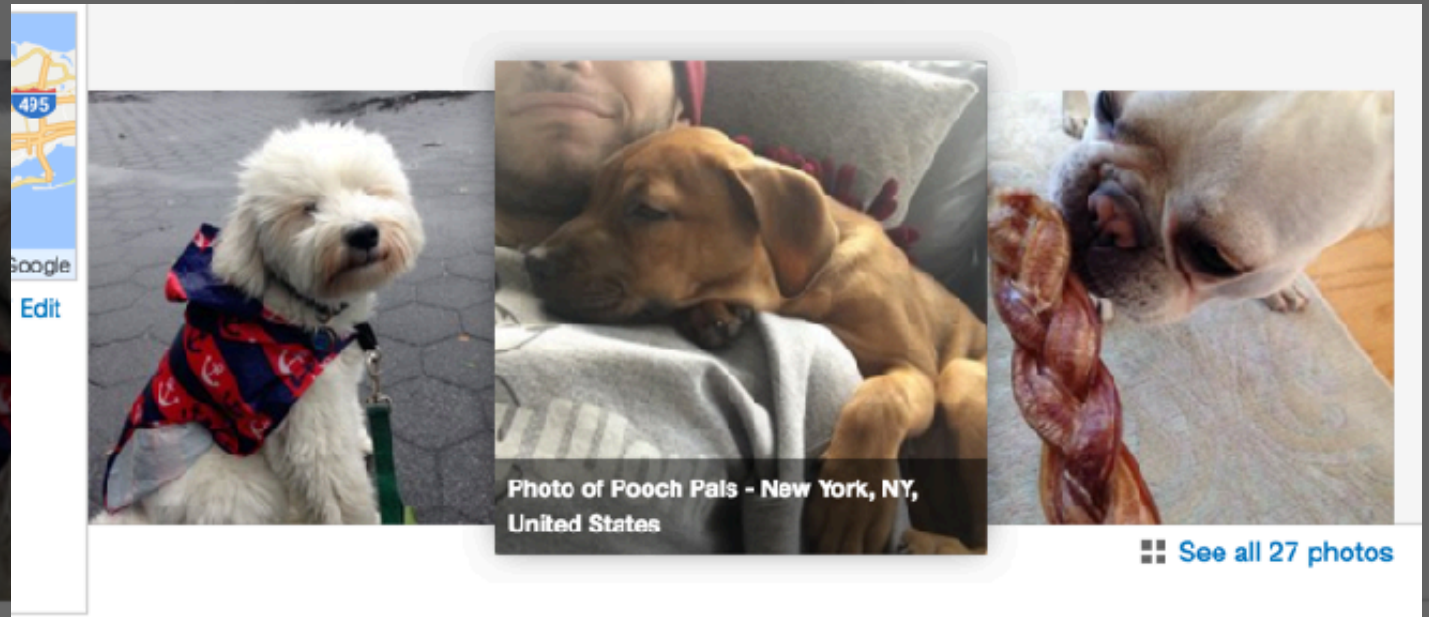
New York, NY 10011

(646) 322-8844

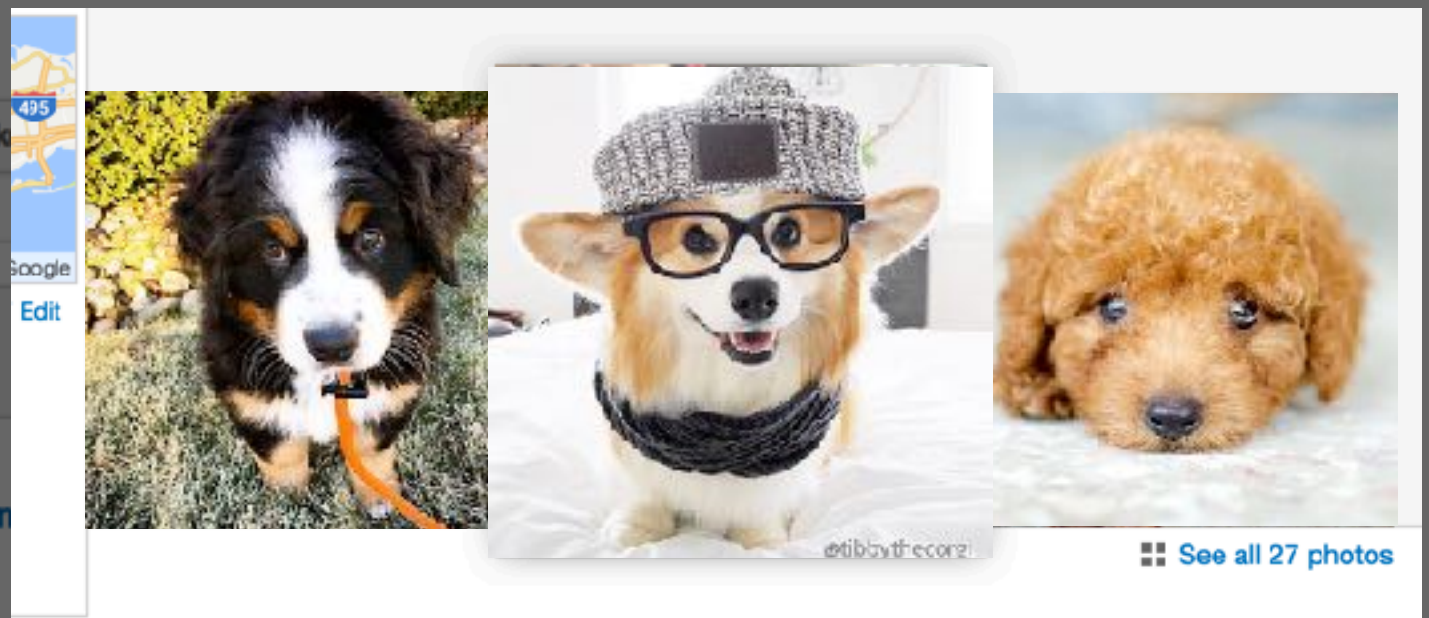
poochpalspetcare.com

photos for
business
applications

- Generalize to aesthetics of a photo
- Select best user submitted



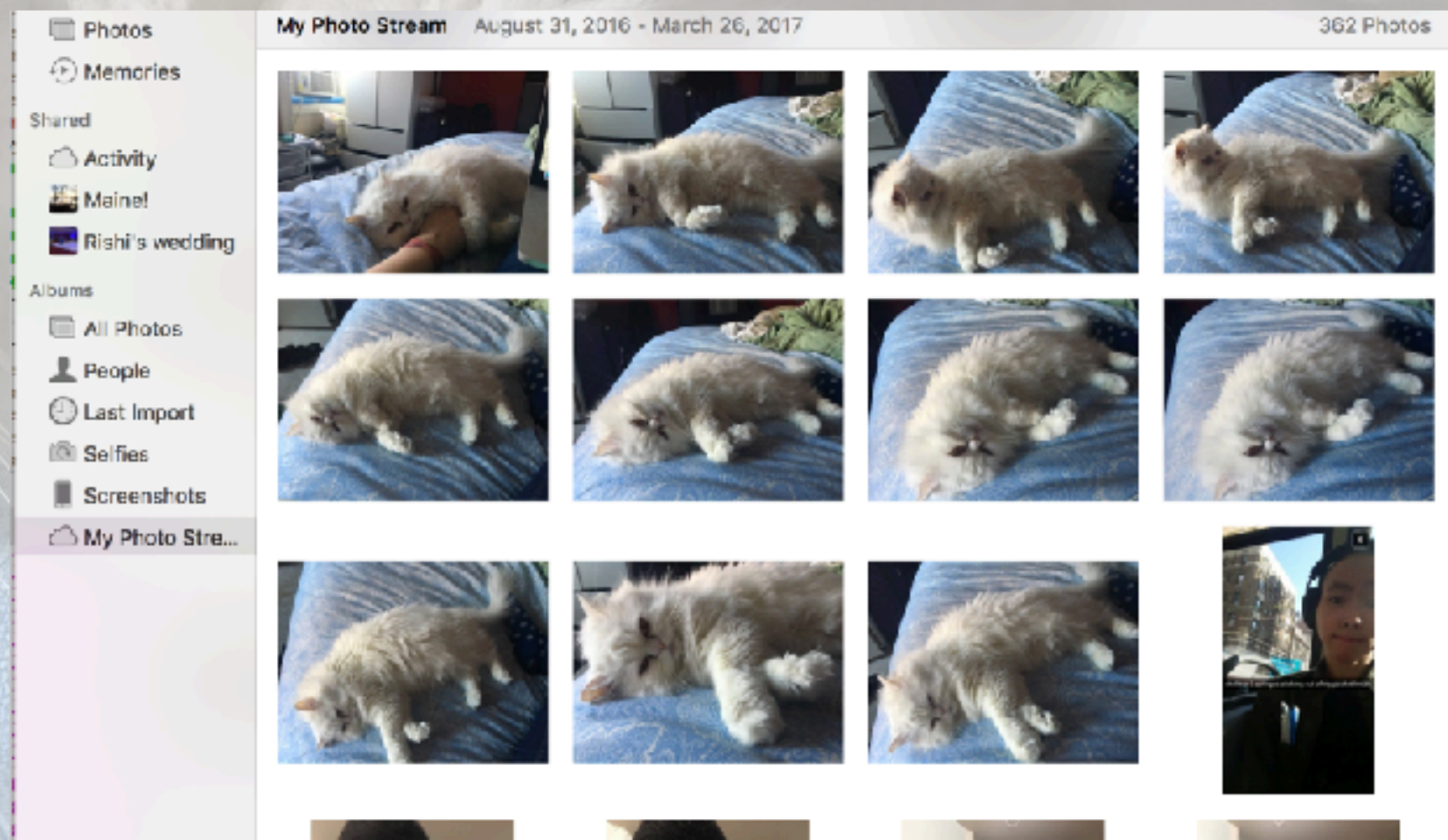
See all 27 photos



See all 27 photos

FURTHER APPLICATIONS

- Create automatic recommendations for in photo filing applications





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