

The Underdogs

A compilation of underappreciated dogs
tweeted by WeRateDogs

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WHAT IS WERATEDOGS?

- Twitter account (@dog_rates) providing daily dog pictures, witty captions, and ratings
- Shares fundraisers for individual dogs, shelters, and rescues in need
- Larger fundraisers get lost in the social media shuffle



GOALS

- Data analysis to identify **Tweets that received fewer favorites** than the average dog posted by WeRateDogs
- Use a deep learning model to identify the **breed of dog** included in each post
- Launch **webapp** to highlight “The Underdogs” and allow users to view Tweets with dogs of a selected breed



DATA & METHODS

- Twitter API with tweepy
- Retrieve most recent Tweets from WeRateDogs
- Retain only those Tweets containing **both** media (i.e., images or video) and a rating (i.e., out of 10)
- Store Tweets and media in separate MongoDB collections

TOOLBOX



DATA & METHODS

- Dog breed classifier with tensorflow
- Model achieves ~90% accuracy when the top 3 predicted breeds are considered
- Performs well for adult dogs with most of their face/body visible
- Get **breed predictions** for unseen media in WeRateDogs Tweets

TOOLBOX



DATA & METHODS

- Database hosted with MongoDB Atlas
- All data collection, cleaning, model predictions, and cloud storage processes are **automated**, run daily at midnight (cron job)
- Streamlit webapp deployed on Heroku

TOOLBOX



RESULTS

the-underdogs-app.herokuapp.com



The Underdogs

A compilation of underappreciated dogs tweeted by [WeRateDogs](#). 💕

The dogs highlighted here received fewer favorites than most of the dogs rated by the WeRateDogs account. We think they deserve some more love, because they're *all* good dogs.

Below, you can also view Tweets featuring dogs of your favorite breed. Just scroll down and choose a breed!



 **WeRateDogs®**  [@dog_rates](#) 

This is Ralph. He's been with [@SPCAwake](#) in Raleigh for the last few months. He will kiss you given any opportunity. And I'm told he's looking for a human who won't even try to limit his time spent lying on his back in the sun. 13/10 [#TrupanionPartner](#)

[campsite.bio/weratedogs](#)



3:01 PM · Oct 7, 2020 

👍 15.6K 💬 73 🔗 Copy link to Tweet

[Tweet your reply](#)

 **WeRateDogs®**  [@dog_rates](#) 

This is Mint. She's adoptable from [@Muttville](#) Senior Dog Rescue in San Francisco. She holds the world record for tiniest crossed paws and would love a home to call her own. You can give her one by clicking below. 13/10 [#TrupanionPartner](#)

[muttville.org](#)



6:00 PM · Feb 17, 2021 

👍 12.9K 💬 76 🔗 Copy link to Tweet

[Tweet your reply](#)

 **WeRateDogs®**  [@dog_rates](#) 

This is Micah. He is one of the longest residents at [@SeattleHumane](#). He has a wonderful foster home, but really wants a family to call his own. He needs some ongoing training and would love a big yard, but is willing to negotiate. 13/10 [#TrupanionPartner](#)

[campsite.bio/weratedogs](#)



1:00 PM · Oct 7, 2020 

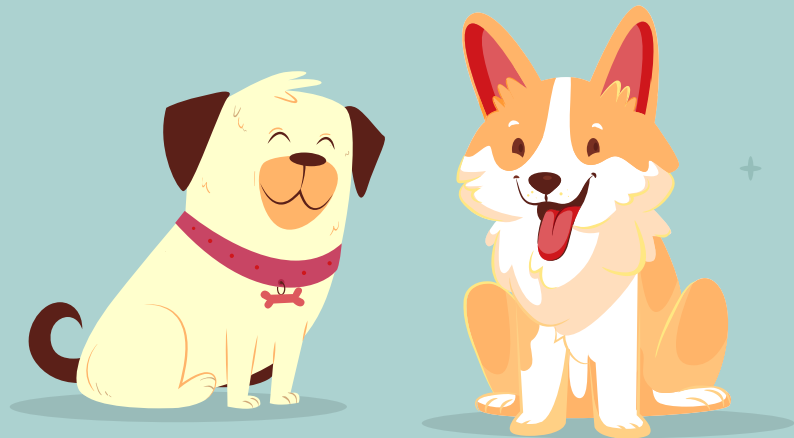
👍 19.6K 💬 85 🔗 Copy link to Tweet

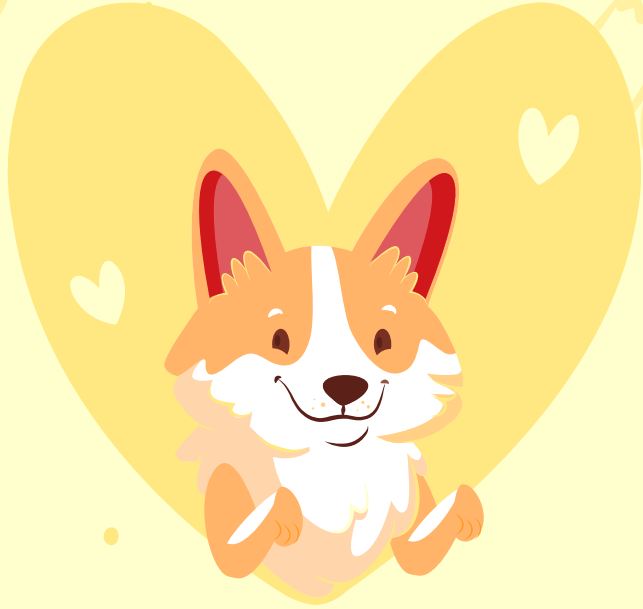
[Tweet your reply](#)

the-underdogs-app.herokuapp.com

CONCLUSIONS & FUTURE WORK

- Automated data collection, processing, and storage allows app to show Tweets posted as recently as the day before
- Address any concerns, bugs, etc. submitted through the app contact form
- Improve deep learning model precision/top k accuracy, include annotated images of puppies, wider range of breeds





THANKS

Questions?

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