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Dog Breed Classification Project

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This blog is a summary of the dog breed classification project. The goal is to classify images of dogs according to their breed and to develop an algorithm that could be used as part of a mobile or web app.

There are following steps in the project

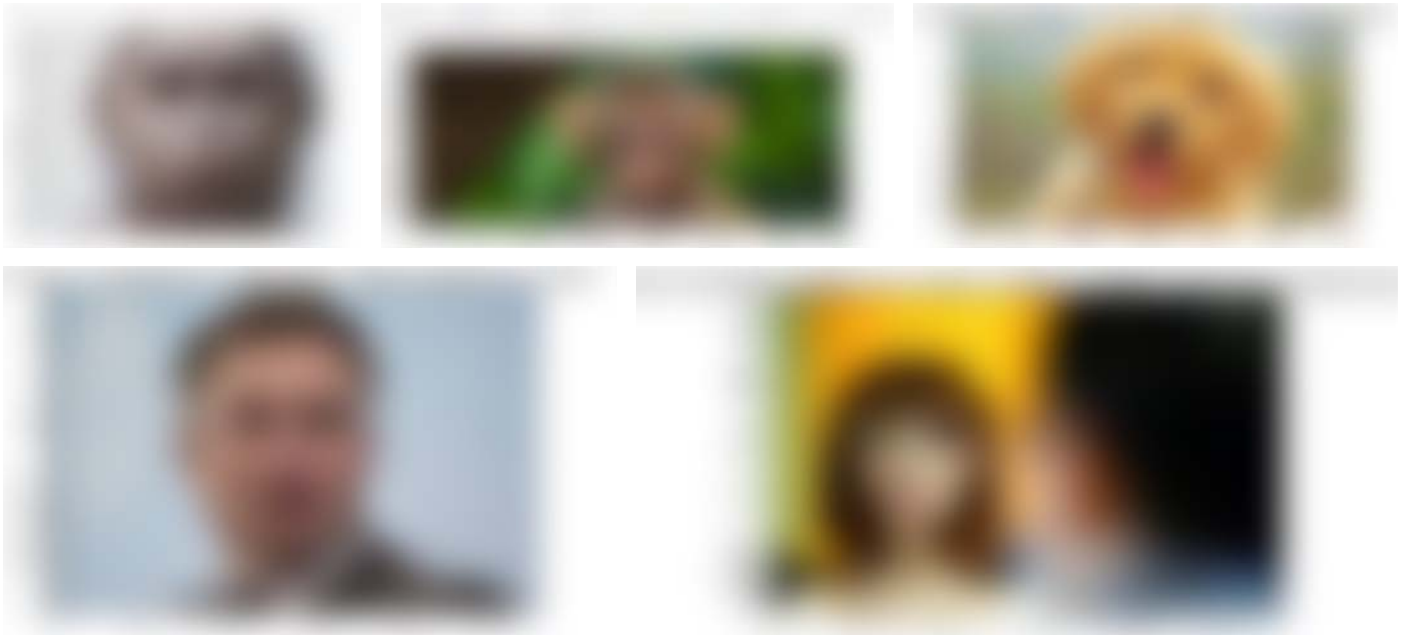
- Step 0: Import Datasets
- Step 1: Detect Humans
- Step 2: Detect Dogs
- Step 3: Create a CNN to Classify Dog Breeds (from Scratch)
- Step 4: Use a CNN to Classify Dog Breeds (using Transfer

. . .

A algorithm using the trained model is then developed to detect human and dog breeds. The algorithm should tell us:

- if a **dog** is detected in the image, return the predicted breed.
- if a **human** is detected in the image, return the resembling dog breed.
- if **neither** is detected in the image, provide output that indicates an error.

Following are some testing results:



. . .

End Notes

I expect higher accuracy than 80,7%.

One reason is that i was working on the workspace from Udacity, i planned to use the Xception bottleneck features, however the file is too big i could not upload it to the workspace. after submitting the project i would like to take more time to try it out with my own environment.

I would use grid search method to find the optimal hyperparameters, such as drop rate, learning rate.

Dog Breed Classifier Deep Learning Transfer Learning

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