Project 4 Proposal

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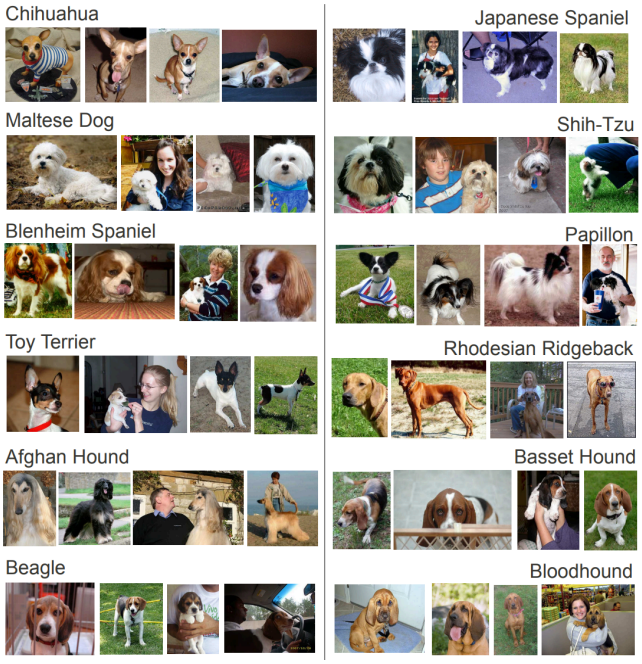
Introduction and topic and/or problem statement

We live in a world where dogs are the best friend known to man. You love em, I love em, we all recognise the value of a good dog. Part of taking pride in ownership of one's dog is the identity of the dog. That is, what breed your dog is. Sure, DNA testing is a great way to give sound results for your dogs genetic makeup, not everyone has time for that process. For this reason, Steven Oh and I, Trey Gower, introduce to the world, The Dog Breed Identifier.

The Dog Breed Identifier has the goal of taking in an image of your dog and returning to you, the user, percentages of the different dog breeds your dog is made up of. The main goal of this project, then, is to train a Large-Language-Model with a vast dataset to achieve this lofty goal.

Data sources

The dataset that will be used is from Stanford and it contains 20,580 images of 120 different dog breeds. The Dataset can be found here.



List of high-level methods being considered

We will be exploring 3 different CNN models:

1. ResNets
2. VGGNet 16
3. AlexNet

Our plan for this project is to train the model with most of the images in the dataset (possibly a 80/20 split). Then the ultimate test will be done using google images of mixed breeds.

Product to be delivered

We will containerize the model with Docker and potentially upload it to a website (using github pages) where users can upload images of their own dogs and get the model to guess what dog breed they have.