Dog Recognition: From Breeds to Individuals

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We aim to implement a recognizer for individual dogs that can train on a limited dataset and reliably recognize a dog after training from a small set of close ups of the dogs face(ie dog mugshots).

**Our Goal**

We aim to create the equivalent of a facial recognition system for dogs, which can easily train new dogs into its system and reliably recognize them in test images. We will not overly concern ourselves with mistaking similar looking dogs for each other, in many cases dogs can look similar enough to each other to confuse people, so we expect some instances to fool our system as well. As long as we can avoid identifying an individual dog as one of a different breed (not including breeds that themselves appear similar enough to confuse a casual observer), and identify the dog correctly in some photographs taken of the dog, we will consider our model successful.

We began by implementing a pre-trained ResNet-50, which includes 117 breeds of dogs.