Intro to Machine Learning

Final Project – Cat vs. Dog Classifier

Henry Kim and Phoebe Zhu

Inspiration

- Classification Problems utilizing neural network
  - Enabled by Large enough dataset/ processing power
  - Creation of Convolutional Layers in Keras
  - Unit 10 Demo 4 Image Classifier using CIFAR10 dataset
- CAPTCHA
  - Completely Automated Public Turing test to tell Computers and Humans Apart
  - Computer can attack since computer classifiers gives over 80% accuracy
- Testing if a dataset is prone to attacks
  - Try to write an algorithm that achieves as high accuracy as possible
- Dogs vs. Cats Classification Project

The Asirra data set

Asirra (Animal Species Image Recognition for Restricting Access) is a HIP that works by asking users to identify photographs of cats and dogs.

This task is difficult for computers, but studies have shown that people can accomplish it quickly and accurately. Many even think it's fun!

Asirra is unique because of its partnership with Petfinder.com, the world's largest site devoted to finding homes for homeless pets. They've provided Microsoft Research with over three million images of cats and dogs, manually classified by people at thousands of animal shelters across the United States.

Jupyter Notebook Demo