**Classification-of-Cat-and-Dog using CNN with image augmentation**

Classification of images between two class cat and dog using CNN with image augmentation .

We are using image augmentation to increase the amount of training data using augmentation by using from keras.preprocessing.image import ImageDataGenerator.

Accuracy we achieved : 100 % percent accuracy by CNN Model with epoch 13th and val\_loss of 0.3049.

Data is very limited and costly in some cases such as medical imagery. To get the best out of it , we are using ImageDataGenerator and creating multiple images for each image we have in our training data set by rotation ,zoom in

datagen = ImageDataGenerator( rotation\_range=40, width\_shift\_range=0.2, height\_shift\_range=0.2, rescale=1./255, shear\_range=0.2, zoom\_range=0.2, horizontal\_flip=True, fill\_mode='nearest')

For details , read Documentation :<http://keras.io/preprocessing/image/>

It uses data that can be downloaded at: <https://www.kaggle.com/c/dogs-vs-cats/data> In our setup, we:

* created a data/ folder
* created train/ and validation/ subfolders inside data/
* created cats/ and dogs/ subfolders inside train/ and validation

Tomato Leaf Predi

1. https://medium.com/@kevalnagda/plant-disease-detector-ddd914687349

Image Classif

Car Dataset : ML

Finance Capst

### Ridge Regression:

robust versions of linear regression in which a small amount of bias is introduced so that we can get better long term predictions. as **Ridge Regression penalty**. We can compute this penalty term by multiplying with the lambda to the squared weight of each individual features.

* Ridge regression is a regularization technique, which is used to reduce the complexity of the model. It is also called as **L2 regularization**.
* It helps to solve the problems if we have more parameters than samples.

Homoscedasticity is a situation when the error term is the same for all the values of independent variables