CATS AND DOGS IMAGES CLASSIFICATION

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GOAL

- To predict the class of an image whether a cat or dog by building and training convolutional neural networks using a deep learning model.

DATASET

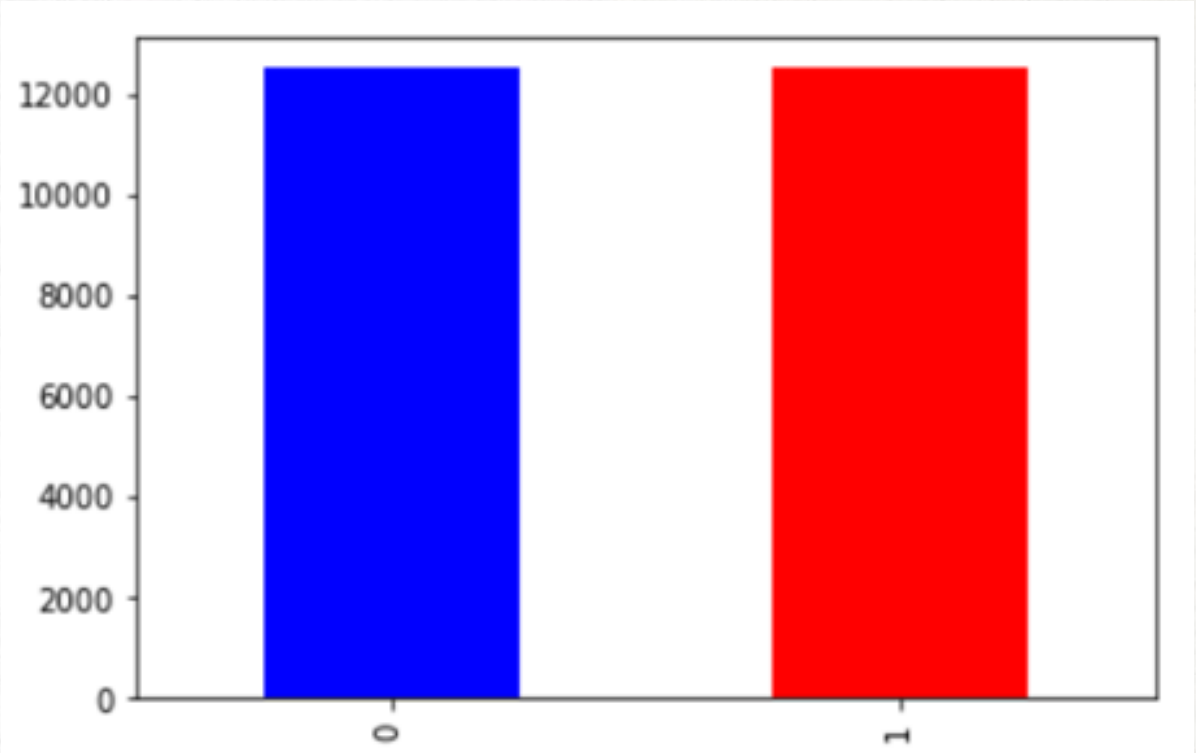
- The dataset has been downloaded from Kaggle website, it has 25000 images and 2 classes which are dog and cat.

TOOLS

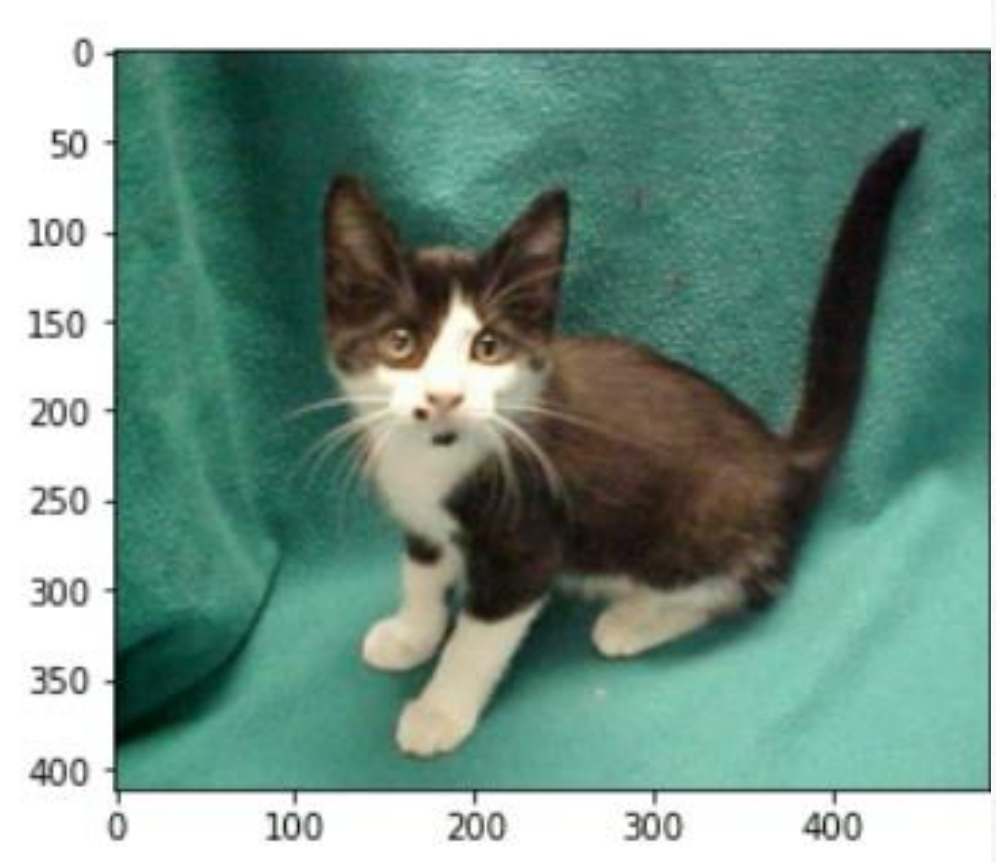
- Pandas
- Numpy
- Matplotlib
- VGG16
- Tensorflow
- Keras
- Sklearn
- Dense

EDA

- Each of the two classes of the dataset has 12500 images which indicates that the dataset is balanced.



EDA



CNN(1) (SIMPLE)

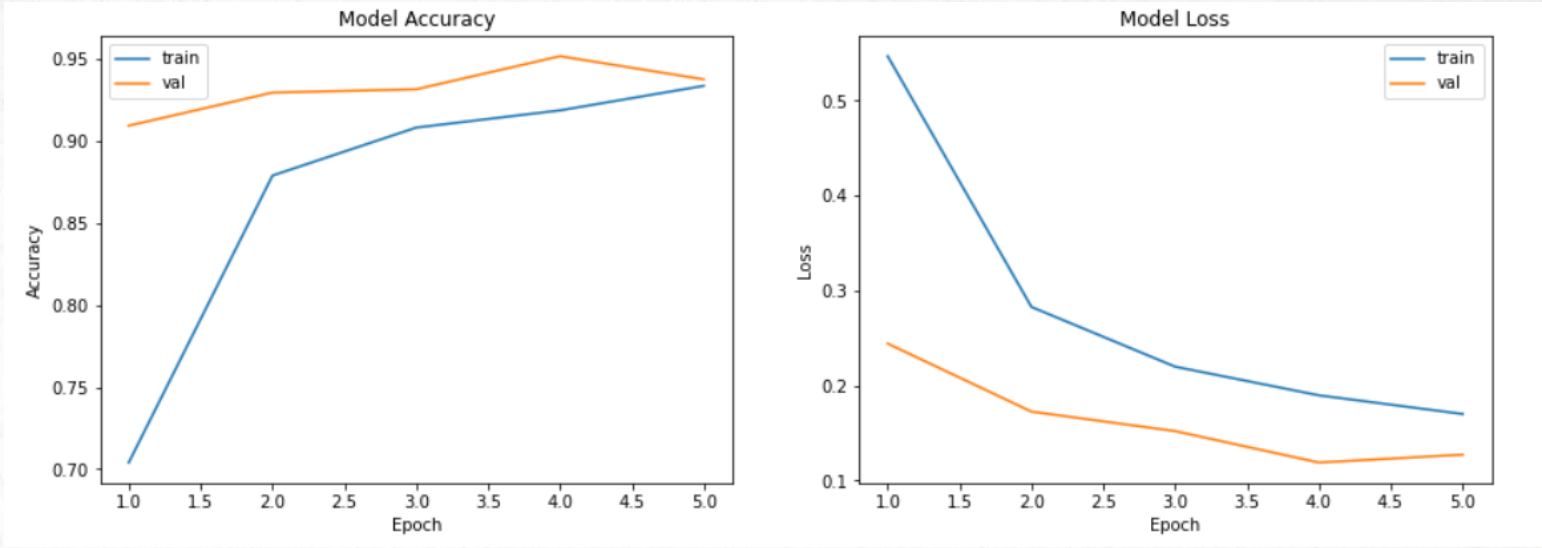
- Train accuracy: 49.864%
- Test accuracy: 50.405%

CNN(2) (MORE COMPLICATED)

- Train accuracy: 65.93%
- Test accuracy: 63.76%

VGG16

- Train accuracy: 93.35%
- Validatin accuracy: 93.75%
- Test accuracy: 93.75%



FUTURE WORK

- Trying more models, and tuning more hyperparameters.
- Designing a mobile application that can recognize the images of cats and dogs.

THANK YOU FOR LISTENING