

Major Project Proposal

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0.1 Problem statement

This project is an application project. Everyday there are lots of stray animals on streets which suffer or get killed humanely in shelters around the world. We could think that if a nice picture of these animals are available it would develop more interest to the people and they can adopt it faster. But the question is what is a good picture. What are the traits that define a good picture and how we can identify it. To answer these questions we would need effective machine learning models, training and testing the models on different sets of images for predicting and analyzing the research questions mentioned above. PetFinder.my is a animal welfare platform that currently uses a basic cuteness meter to rank the pet photos. While this tool seems to be useful there are lots of improvements that could be made and this functionality is still in experimental stage. This project is for that welfare platform.

0.2 Methodology

Since in this project we need to find out is the picture nice enough to gain interest it looks more like a image classification problem. Basically in image classification the images are segmented into different categories based on features. The features will be like pixel intensity, change in pixel values, color composition, background color and many more. For implementing this kind of problem I am planning to use the Convolution Neural network model which is a part of Deep Learning model. The reason for using this model is because it assigns importance to various aspects of the image and helps in differentiating one another.

0.3 Data Preparation

The data for this project will be prepared by collecting the pets images from PathFinder.my since there are thousands of collections of pets pictures that can be used for our analysis. And if time permits pictures can also be collected from other open sources like google to test the model on it.

0.4 Evaluation Plan

The model will be evaluated by calculating squared mean error on each image of the test set and display it in form of the csv file.