

Project Proposal

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Project:

Photo classification using the widely used CIFAR0-10 data set.

Data Set:

CIFAR-10 is photo classification dataset used for image classification. The data set consists of 60,000 32*32 color images that are divided into 10 classes, with 6000 images per class. The data set consists of 50,000 training images and 10,000 test images. It will be divided into 5 training batches and one test batch for each 10,000 images.

Data Source:

CIFAR is an acronym for Canadian Institute for Advanced Research and the CIFAR-10 dataset was developed by researchers at the CIFAR institute.

Link: <https://www.cs.toronto.edu/~kriz/cifar.html>

How is our project different?

As per our research there has been an 18% test errors without data augmentation and there were obtained using a convolutional neural network. Researchers have also used multiple classes to classify the images, while our goal is to use fewer sub classification techniques.

Methods:

Convolution Neural Network (Current proposal)

Why Deep Learning?

The dataset consists of 60,000 images categories into 10 generalized labels. Multiple filters will be applied to the models to generate a better prediction model. The sheer size and scale of this model will require the additional calculation capabilities. Deep learning models have the capability to perform the calculations against the traditional models.

Project Responsibility:

Role	Responsibility
Data Search, sort and agreement	All
Cleaning	Siddhant Burande
Exploratory Data Analysis	Sakshi Nevatia
Model definition	Satvika Shetty
Fitting the model	Suresh Danala
Prediction	Rushabh Barbhaya
Model Report	All