

Flower Classification using Tensorflow And OpenCv

→ I used python libraries for this project to draw some visualizations of the images

→ I installed the Computer vision package for this project

→ I used Tensorflow for this project and used PIL package for analyzing image.

I downloaded the data from google website and I converted into Opencv object for further processes.

Dataset Source:

https://storage.googleapis.com/download.tensorflow.org/example_images/flower_photos.tgz

In below image, 4 new training samples are generated from original sample using different transformations



Original Image



Horizontal Flip



Contrast



Rotation



Zoom

- ➔ I imported the pathlib library for converting the path of my images into windowpath.
- ➔ The dataset is contains the different types of flower images including roses,daisy,dandelion etc.
- ➔ Then I used preprocessing techniques in this project like train test split ,Feature Scaling etc.
- ➔ I used Convolutional neural network for this image classification, which is better neural network in deep learning.
- ➔ But my model give only 65% performance in testing data, that means it shows some overfitting conditions. To overcome this problem I used a special techniques like Data Augmentation
- ➔ Data augmentation technique includes transforming our input image into different forms like RandomZoom,RandomFlip,RandomContrast etc..
- ➔ By converting my input images into different transforms I get more accuracy more than before using the same model

Project Report by
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