1. flower image dataset
2. <https://www.kaggle.com/alxmamaev/flowers-recognition>.
3. The dataset contains five classes of flower images of variable size namely chamomile, tulip, rose, sunflower, dandelion. Resized all images to 80\*80 pixel and converted all colour images to grey images.
4. Randomly shuffled all images to create training, test set with ratio of 90: 10, respectively. (Reduce the training size by 1/ 5 if computation resources are limited).
5. Training Convolutional neural network with max pooling and a fully connected layer at the top, to classify the flower images. Now run the network by changing the following hyper-parameters:

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| --- | --- | --- | --- |
| Hidden Layers | Convolution stride | Convolution size | Regularization |
| 1 | (5\*5, 4\*4, 3\*3) | [ 16,32, 64] | Dropout of 0.8 after each layer |
| 2 | (5\*5, 4\*4, 3\*3) | [ 16,32, 64] | Batch normalization after each layer (except the first) |
| 3 | (5\*5, 4\*4, 3\*3, 3\*3) | [ 16,32, 64, 96] | Batch normalization after each layer (except the first) |

1. Ploted the graph for loss vs epoch and accuracy(train, test set) vs epoch for all the above cases. Also plot the accuracy for all set.
2. Tested experimentation for colour images. And visualised the test result.