This project features the classification of three classes which are grasslands, trees and mountains. Image classification is the task of assigning pixels in the image to categories or classes of interest.In order to that ,the technique of convolutional neural network is used. A Convolutional Neural Network (CNN) is comprised of one or more convolutional layers and then followed by one or more fully connected layers as in a standard multilayer neural network. To build a convolutional neural network based image classifier, we shall build a 6 layer neural network that will identify and separate images. This network that we shall build is a very small network.

While training, images from different classes are fed to a convolutional layer which is followed by 2 more convolutional layers. After convolutional layers, we flatten the output and add two fully connected layer in the end. The second fully connected layer has only two outputs which represent the probability of an image. We are using Anaconda software to run our project which is based on the language Python. TensorFlow open source software library is used.

In order to run the project firstly dataset2.py file is run then train2.py and finally predict2.py.

Classification of images is done successfully showing the probabilities of image to be a tree or grasslands or mountains (classes) .The class which gets the highest probability after the data set is fed to the code is considered to be class of the image which was given for classification.

Convolutional neural network basics: [https://www.youtube.com/watch?v=2- Ol7ZB0MmU](https://www.youtube.com/watch?v=2-%20%20%20%20Ol7ZB0MmU)