

Image classification task

The train data consists of 20000 images, belonging to 10 different classes. The task is to train a convolutional neural net in keras for this multi-class classification. The purpose here is to get familiar with ***image data format, working with images, building the training dataset, Convolutional Architectures, Keras API & hyper parameters and their tuning.***

The test set contains 2000 images. Label for test data are not given. You have to submit the probabilities for each class for all the samples in test data. The order of predictions should be same as order of test samples in 'test.npz'. 'sample_submission.csv' is given as a reference. Your submission should follow the same format. The evaluation criteria is 'CrossEntropy Loss'.

$$Loss = -\frac{1}{N} \sum_{n=1}^n \sum_{i=1}^I [y_i^{(n)} \log(\hat{y}_i^{(n)})]$$

Keep in mind the following things while doing the assignment.

- Quality of code. This includes readability and conciseness.
- Machine learning practices. (You should already know these by now. If not, find out!)
- Test Accuracy

Submission format:

1. You should submit a zip file which includes the '.ipynb' code file and '.csv' predictions file. The zip file should contain your full name.
2. Predictions file should follow the 'sample_submission.csv' format.
3. If any of the above mentioned guideline(s) are not followed, there'll be a penalty

Note: The data is shared in '.npz' format