

Dog Breed Identification

Method Description

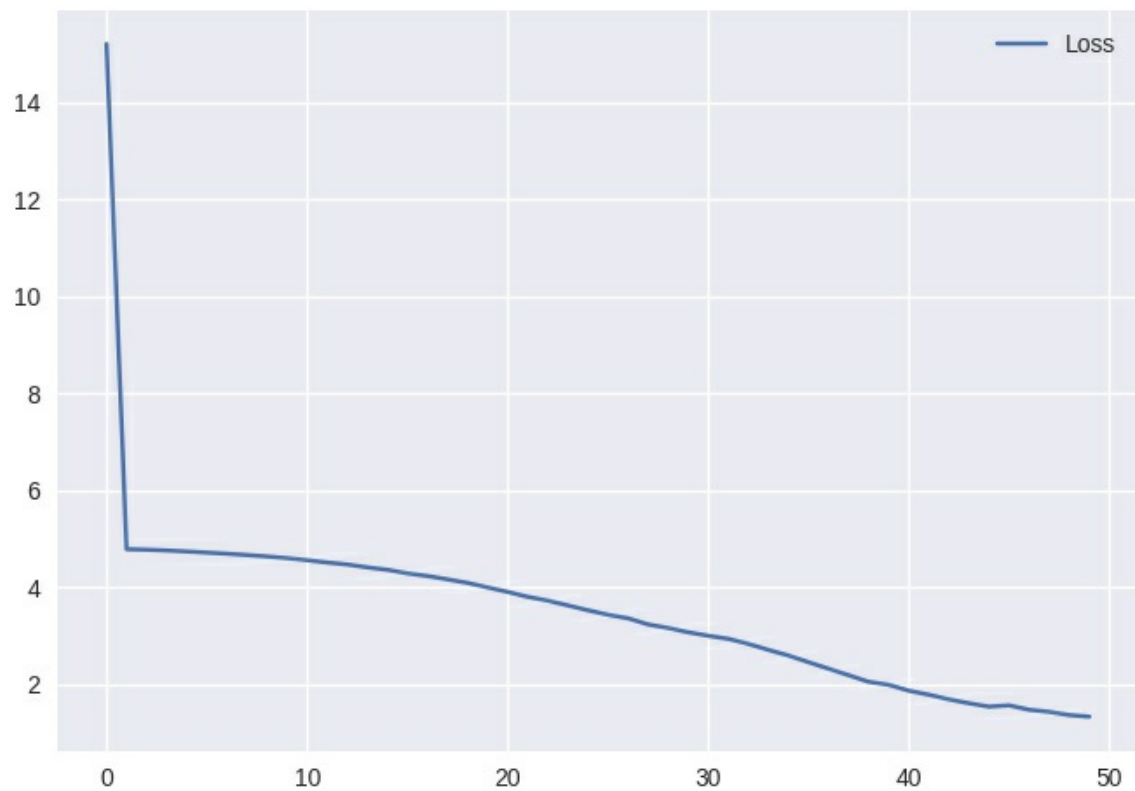
1. Load data path
2. Load data and labels
3. Use modified VGG16 versions to classify the pictures. This is a 120-class problem. Hence, the last layer is set to be a fully connected layer with 120 internal nodes and softmax as its activation function. The `tf.losses.softmax_cross_entropy` is selected as the loss function. Here is a list about each modified version:
 - Pre-trained weights by [uiuc-sports](#):
 1. The initial weights are loaded from pre-trained uiuc-sports.
 2. Batch size: 32
 - Pre-trained weights by [Imagenet](#):
 1. The initial weights are loaded from pre-trained Imagenet.
 2. Batch size: 32

Training Accuracy & Loss

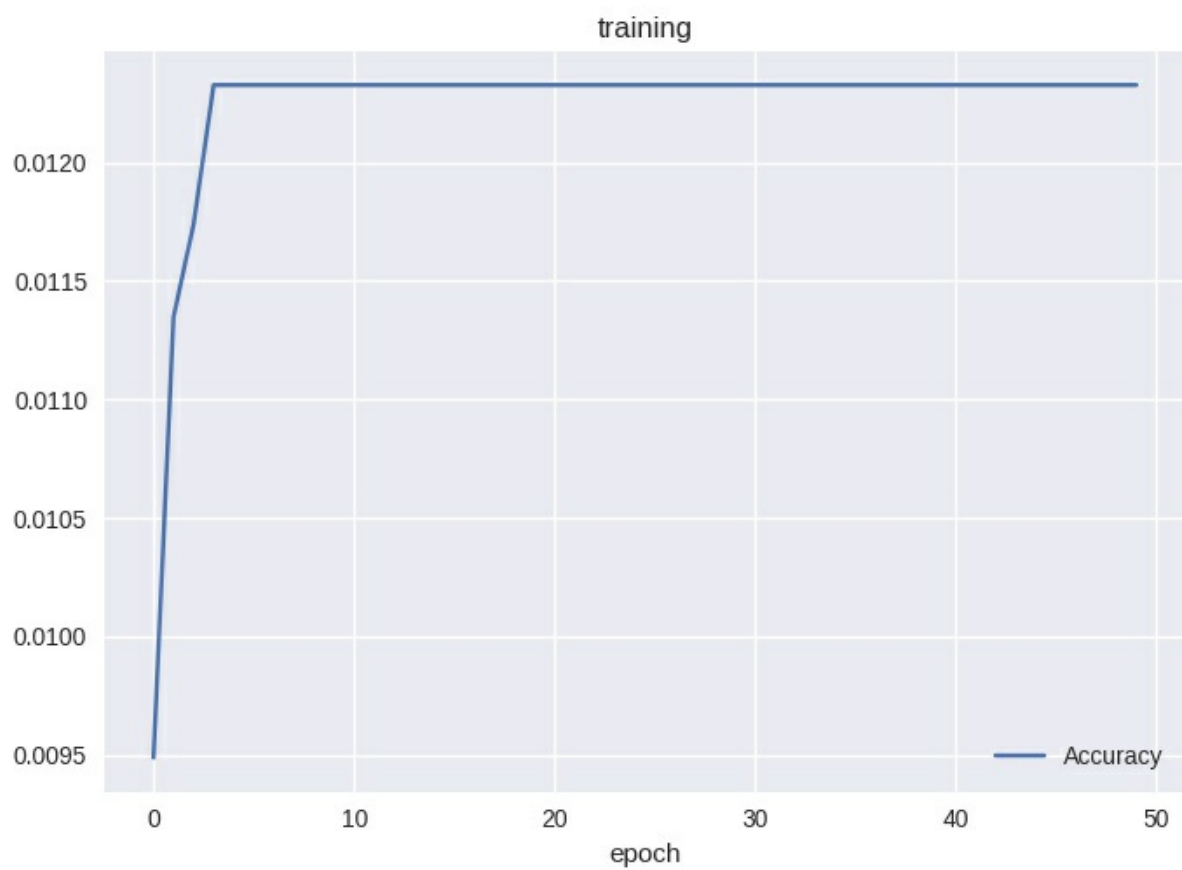
- uiuc accuracy:



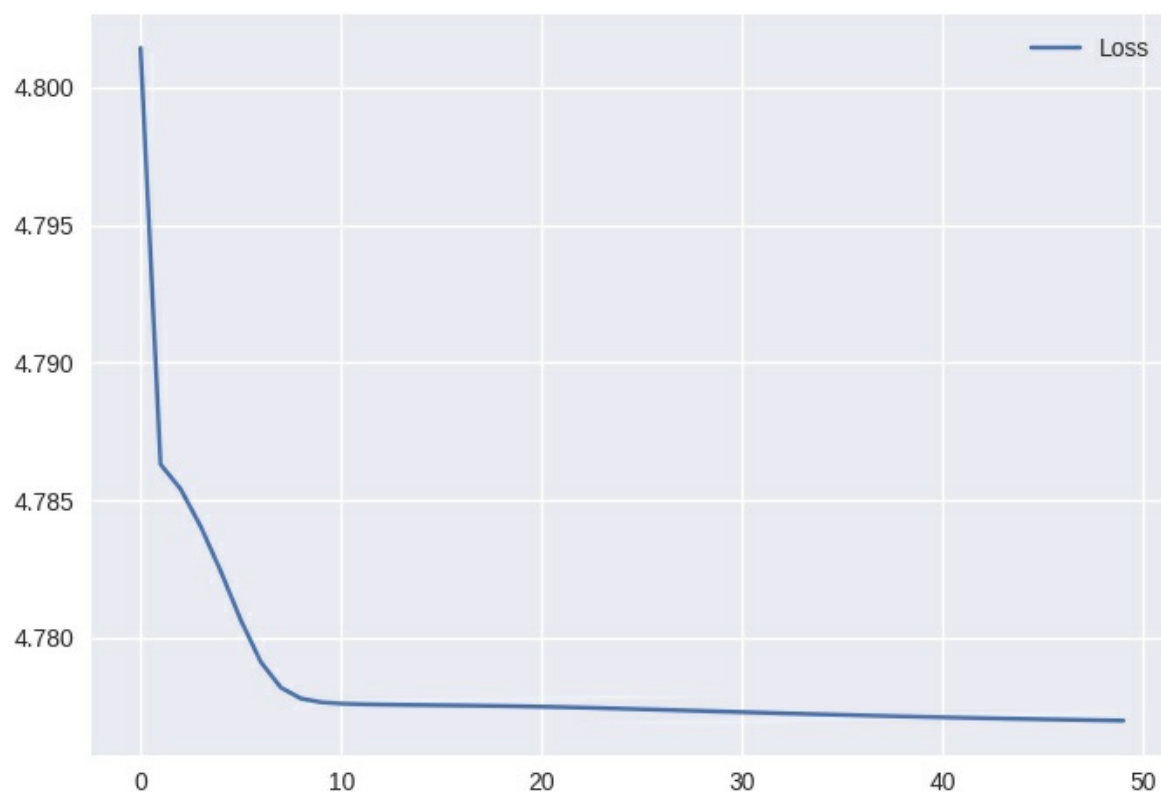
- uiuc loss:



- Imagenet accuracy:



- Imagenet loss:



LB Score

- Pre-trained weights by uiuc: 9.53757
- Pre-trained weights by Imagenet: 4.78579

Overview	Data	Kernels	Discussion	Leaderboard	Rules	Team	My Submissions	Late Submission
✓ Your submission description has been saved.								
All	Successful	Selected						
Submission and Description				Public Score		Use for Final Score		
prediction.csv an hour ago by Superdanby Pretrained weights from uiuc-sports				9.53757		<input type="checkbox"/>		
prediction.csv 6 hours ago by Superdanby Pretrained weights from imagenet				4.78579		<input type="checkbox"/>		

Problems Encountered

The uiuc-sports dataset has only 8 classes. It has a huge difference with this 120-class problem. And, in this problem, there is few data for each class(around 80 pics per class). So, the result of uiuc pre-trained weights is terrible. Though the

pre-trained weights from Imagenet has a much better score, it is only slightly better than guessing randomly. I think I should do more on data augmentation. It's a pity that the deadline has arrived.

Refernce

<https://www.kaggle.com/ardiya/tensorflow-vgg-pretrained/notebook>