UDACITY

PROJECT

Object Classification

A part of the Deep Learning Nanodegree Foundation Program

PROJECT REVIEW

CODE REVIEW

NOTES

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Meets Specifications

I really loved reviewing this amazing submission, great work, keep this up in future projects and I am sure you will master this Program!

Please don't forget to rate this review if you feel like doing this!

Required Files and Tests

The project submission contains the project notebook, called "dlnd_image_classification.ipynb".

All the unit tests in project have passed.

Preprocessing

The `normalize` function normalizes image data in the range of 0 to 1, inclusive.

The `one_hot_encode` function encodes labels to one-hot encodings.

Neural Network Layers

The neural net inputs functions have all returned the correct TF Placeholder.

The `conv2d_maxpool` function applies convolution and max pooling to a layer.

The convolutional layer should use a nonlinear activation.

This function shouldn't use any of the tensorflow functions in the tf.contrib or tf.layers namespace.

Great implementation of the nonlinear relu activation layer!

The `flatten` function flattens a tensor without affecting the batch size.

The `fully_conn` function creates a fully connected layer with a nonlinear activation.

Great implementation of the nonlinear relu activation layer again!

Pro tip:
The tf.contrib.layers.fully_connected nonlinear activation layer uses ReLU activation by default, so practically we don't have to add the "activation_fn=tf.nn.relu" setting if we choose to use this command in this function for example.

The `output` function creates an output layer with a linear activation.

Neural Network Architecture

The `conv_net` function creates a convolutional model and returns the logits. Dropout should be applied to alt least one layer.

You implemented Dropout in your conv_net function, good job!

Neural Network Training

The `train_neural_network` function optimizes the neural network.

The `print_stats` function prints loss and validation accuracy.

The hyperparameters have been set to reasonable numbers.

The neural network validation and test accuracy are similar. Their accuracies are greater than 50%.

Great to see Validation & Test accuracy scores ~ 67%, and also good in line with each other.

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