Meets Specifications

This is a perfect submission. You have a very good understanding of underlying concepts. Congratulations on successfully completing the project.

**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.**

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

**The fully\_conn function creates a fully connected layer with a nonlinear activation.**

**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.**

Good job connecting all the layers properly! ! I like your neural network architecture with multiple convolution and fully connected layers.

**Neural Network Training**

**The train\_neural\_network function optimizes the neural network.**

Well done!

**The print\_stats function prints loss and validation accuracy.**

**The hyperparameters have been set to reasonable numbers.**

Your choice of hyper parameter is good.  
The blog below has an interesting comparison of CIFAR 10 accuracies for different architectures:  
<http://zybler.blogspot.ca/2011/02/table-of-results-for-cifar-10-dataset.html>  
You can try reading through some of the papers and understanding what has worked well for others.

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