Image Preprocessing:

- Flip the image and adjust steering measurement accordingly
- Use camera images from left and right cameras
- Normalize the image and mean centered around 0
- Crop regions that are not of interest e.g. top portion of the image containing trees and hills and the bottom portion containing car's hood
- TODO:
    - Apply translation and rotation of images as well as adjust brightness adjustments to make the model more generalized

Model:

I've used a model based off of NVIDIA's architecture

Convolutional Layer: 24, 5, 5
Leaky RELU Activation: alpha = 0.001
Convolutional Layer: 36, 3, 3
Leaky RELU Activation: alpha = 0.001
Convolutional Layer: 48, 3, 3
Leaky RELU Activation: alpha = 0.001
Convolutional Layer: 64, 3, 3
Leaky RELU Activation: alpha = 0.001
Convolutional Layer: 64, 3, 3
Leaky RELU Activation: alpha = 0.001
Fully Connected Layer: 1164
Leaky RELU Activation: alpha = 0.001
Fully Connected Layer: 100
Leaky RELU Activation: alpha = 0.001
Fully Connected Layer: 50
Leaky RELU Activation: alpha = 0.001
Fully Connected Layer: 10
Leaky RELU Activation: alpha = 0.001
Output

Optimizer: Adam

Loss Function: MSE (Mean Squared Error)

Epochs: 3