Python 3.6.3 |Anaconda custom (64-bit)| (default, Oct 15 2017, 03:27:45) [MSC v.1900 64 bit (AMD64)]

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IPython 6.1.0 -- An enhanced Interactive Python.

runfile('C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py', wdir='C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new')

Using TensorFlow backend.

Total Samples : 48216

Initial Angle Distribution

Total Left Angles : 593

Total Right Angles : 902

Total Straight Angles : 6541

Left to Straight Ratio : 11.03035413153457

Right to Straight Ratio : 7.251662971175167

Train Sample Size : 43394

Validation Sample Size : 4822

After TTS, Angle Distribution

Total Left Angles : 4797

Total Right Angles : 4770

Total Straight Angles : 33827

Left to Straight Ratio : 7.051698978528247

Right to Straight Ratio : 7.091614255765199

C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py:115: UserWarning: Update your `Conv2D` call to the Keras 2 API: `Conv2D(24, (5, 5), activation="relu", strides=(2, 2))`

model.add(Convolution2D(24, 5, 5, subsample=(2, 2), activation='relu'))

C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py:116: UserWarning: Update your `Conv2D` call to the Keras 2 API: `Conv2D(36, (5, 5), activation="relu", strides=(2, 2))`

model.add(Convolution2D(36, 5, 5, subsample=(2, 2), activation='relu'))

C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py:117: UserWarning: Update your `Conv2D` call to the Keras 2 API: `Conv2D(48, (5, 5), activation="relu", strides=(2, 2))`

model.add(Convolution2D(48, 5, 5, subsample=(2, 2), activation='relu'))

C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py:118: UserWarning: Update your `Conv2D` call to the Keras 2 API: `Conv2D(64, (3, 3), activation="relu")`

model.add(Convolution2D(64, 3, 3, activation='relu'))

C:/Users/willy/Downloads/CarND-Behavioral-Cloning-P3-master-new/model.py:119: UserWarning: Update your `Conv2D` call to the Keras 2 API: `Conv2D(64, (3, 3), activation="relu")`

model.add(Convolution2D(64, 3, 3, activation='relu'))

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Layer (type) Output Shape Param #

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lambda\_1 (Lambda) (None, 160, 320, 3) 0

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cropping2d\_1 (Cropping2D) (None, 65, 320, 3) 0

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conv2d\_1 (Conv2D) (None, 31, 158, 24) 1824

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conv2d\_2 (Conv2D) (None, 14, 77, 36) 21636

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conv2d\_3 (Conv2D) (None, 5, 37, 48) 43248

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conv2d\_4 (Conv2D) (None, 3, 35, 64) 27712

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conv2d\_5 (Conv2D) (None, 1, 33, 64) 36928

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dropout\_1 (Dropout) (None, 1, 33, 64) 0

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flatten\_1 (Flatten) (None, 2112) 0

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dense\_1 (Dense) (None, 100) 211300

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dense\_2 (Dense) (None, 50) 5050

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dense\_3 (Dense) (None, 10) 510

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dense\_4 (Dense) (None, 1) 11

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Total params: 348,219

Trainable params: 348,219

Non-trainable params: 0

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C:\Users\willy\Anaconda3\lib\site-packages\keras\models.py:848: UserWarning: The `nb\_epoch` argument in `fit` has been renamed `epochs`.

warnings.warn('The `nb\_epoch` argument in `fit` '

Train on 43394 samples, validate on 4822 samples

Epoch 1/10

43394/43394 [==============================] - 78s - loss: 0.0184 - acc: 0.1803 - val\_loss: 0.0170 - val\_acc: 0.1860

Epoch 2/10

43394/43394 [==============================] - 62s - loss: 0.0170 - acc: 0.1803 - val\_loss: 0.0154 - val\_acc: 0.1860

Epoch 3/10

43394/43394 [==============================] - 62s - loss: 0.0166 - acc: 0.1803 - val\_loss: 0.0150 - val\_acc: 0.1860

Epoch 4/10

43394/43394 [==============================] - 63s - loss: 0.0164 - acc: 0.1803 - val\_loss: 0.0148 - val\_acc: 0.1860

Epoch 5/10

43394/43394 [==============================] - 62s - loss: 0.0162 - acc: 0.1803 - val\_loss: 0.0148 - val\_acc: 0.1860

Epoch 6/10

43394/43394 [==============================] - 62s - loss: 0.0158 - acc: 0.1803 - val\_loss: 0.0143 - val\_acc: 0.1860

Epoch 7/10

43394/43394 [==============================] - 62s - loss: 0.0153 - acc: 0.1803 - val\_loss: 0.0143 - val\_acc: 0.1862

Epoch 8/10

43394/43394 [==============================] - 62s - loss: 0.0149 - acc: 0.1803 - val\_loss: 0.0138 - val\_acc: 0.1864

Epoch 9/10

43394/43394 [==============================] - 62s - loss: 0.0144 - acc: 0.1803 - val\_loss: 0.0136 - val\_acc: 0.1864

Epoch 10/10

43394/43394 [==============================] - 62s - loss: 0.0139 - acc: 0.1804 - val\_loss: 0.0135 - val\_acc: 0.1864