

Self Driving Car

Problem Statement:

Given the front camera view of a car, we need to predict the steering angle to which the steering needs to rotate. This is a minimal version of self driving car.

1. Loading the Data

```
In [1]: # Importing Required Packages
import tensorflow as tf
import os
from tensorflow.core.protobuf import saver_pb2
import driving_data
import scipy.misc
import model
import os
import numpy as np
import random
from scipy import pi
from itertools import islice
import cv2
from subprocess import call
import model
import scipy
import scipy.misc
import random
import warnings
import matplotlib.pyplot as plt
%matplotlib inline
warnings.filterwarnings('ignore')
```

WARNING:tensorflow:From C:\Users\praveenkotha2\Anaconda3\lib\site-packages\tensorflow\python\framework\op_def_library.py:263: colocate_with (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Colocations handled automatically by placer.

WARNING:tensorflow:From C:\Users\praveenkotha2\Downloads\Autopilot-TensorFlow-master\Autopilot-TensorFlow-master\model.py:58: calling dropout (from tensorflow.python.ops.nn_ops) with keep_prob is deprecated and will be removed in a future version.

Instructions for updating:

Please use `rate` instead of `keep_prob`. Rate should be set to `rate = 1 - keep_prob`.

```

In [2]: xs = []
        ys = []

        #points to the end of the last batch
        train_batch_pointer = 0
        val_batch_pointer = 0

        #read data.txt
        with open("driving_dataset/data.txt") as f:
            for line in f:
                xs.append("driving_dataset/" + line.split()[0])
                #the paper by Nvidia uses the inverse of the turning radius,
                #but steering wheel angle is proportional to the inverse of turning radius
                #so the steering wheel angle in radians is used as the output
                ys.append(float(line.split()[1]) * scipy.pi / 180)

        #get number of images
        num_images = len(xs)

        train_xs = xs[:int(len(xs) * 0.7)]
        train_ys = ys[:int(len(xs) * 0.7)]

        val_xs = xs[-int(len(xs) * 0.3):]
        val_ys = ys[-int(len(xs) * 0.3):]

        num_train_images = len(train_xs)
        num_val_images = len(val_xs)

        def LoadTrainBatch(batch_size):
            global train_batch_pointer
            x_out = []
            y_out = []
            for i in range(0, batch_size):
                x_out.append(scipy.misc.imresize(scipy.misc.imread(train_xs[(train_batch_pointer + i) % num_train_images])[-150:], [66, 200]) / 255.0)
                y_out.append([train_ys[(train_batch_pointer + i) % num_train_images]])
                train_batch_pointer += batch_size
            return x_out, y_out

        def LoadValBatch(batch_size):
            global val_batch_pointer

```

```

x_out = []
y_out = []
for i in range(0, batch_size):
    x_out.append(scipy.misc.imresize(scipy.misc.imread(val_xs[(val_batch_pointer + i) % num_val_images])[-150:], [66, 200]) / 255.0)
    y_out.append([val_ys[(val_batch_pointer + i) % num_val_images]])
    val_batch_pointer += batch_size
return x_out, y_out

```

In [3]: *# Lets explain whats happening with the first images*

```

image_read = scipy.misc.imread(train_xs[0])
print("original image size", image_read.shape)

print("After taking the last 150 rows i.e lower part of the images where road is present, ", image_read[-150:].shape)
image_read = image_read[-150:]
resized_image = scipy.misc.imresize(image_read, [66, 200])
print("After resizing the images into 66*200, ", resized_image.shape)
# 200/66 = 455/150 = 3.0303 => we are keeping aspect ratio when we are resizing it

```

original image size (256, 455, 3)

After taking the last 150 rows i.e lower part of the images where road is present, (150, 455, 3)

After resizing the images into 66*200, (66, 200, 3)

```
In [4]: scipy.misc.imresize(scipy.misc.imread(train_xs[0])[-150:], [66, 200])
```

```
Out[4]: array([[180, 162, 166],
               [176, 172, 173],
               [176, 176, 171],
               ...,
               [ 90,  88, 113],
               [106,  93,  99],
               [101, 103,  81]],

               [[191, 188, 192],
               [186, 193, 204],
               [187, 196, 200],
               ...,
               [ 84,  82,  97],
               [ 86,  88,  79],
               [ 86, 101,  74]],

               [[208, 201, 223],
               [199, 212, 230],
               [201, 212, 226],
               ...,
               [128, 124, 115],
               [128, 126, 117],
               [132, 126, 119]],

               ...,

               [[ 54,  43,  55],
               [ 59,  43,  56],
               [ 55,  41,  53],
               ...,
               [ 23,  24,  25],
               [ 24,  25,  27],
               [ 25,  26,  29]],

               [[ 56,  36,  58],
               [ 53,  35,  63],
               [ 51,  39,  54],
               ...,
               [ 23,  25,  22],
               [ 23,  26,  23],
               [ 24,  27,  25]],

               [[ 68,  37,  44],
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[ 53, 41, 49],  
[ 49, 49, 37],  
...,  
[ 28, 25, 26],  
[ 26, 23, 25],  
[ 24, 22, 24]]], dtype=uint8)
```

In [5]:

```
xs
```



```
Out[5]: ['driving_dataset/0.jpg',  
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2. Data Analysis

In [6]: *# read images and steering angles from driving_dataset folder*

```
DATA_FOLDER = './driving_dataset/' # change this to your folder
TRAIN_FILE = os.path.join(DATA_FOLDER, 'data.txt')
LIMIT = None

split = 0.8
X = []
y = []
with open(TRAIN_FILE) as fp:
    for line in islice(fp, LIMIT):
        path, angle = line.strip().split()
        full_path = os.path.join(DATA_FOLDER, path)
        X.append(full_path)

        # converting angle from degrees to radians
        y.append(float(angle) * pi / 180 )

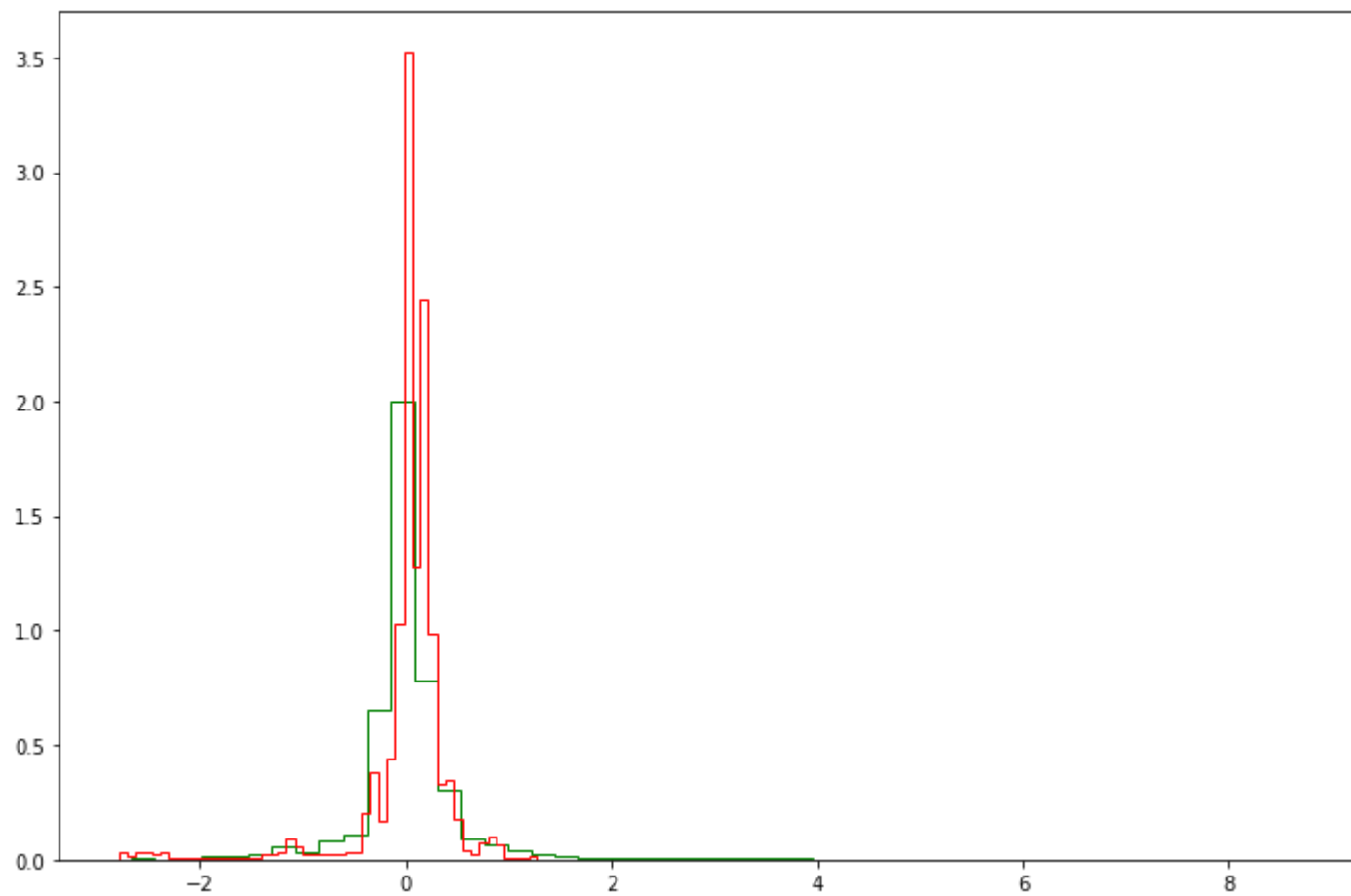
y = np.array(y)
print("Completed processing data.txt")

split_index = int(len(y)*0.8)

train_y = y[:split_index]
test_y = y[split_index:]
```

Completed processing data.txt

```
In [7]: # PDF of train and test 'y' values.  
plt.figure(figsize=(12,8))  
plt.hist(train_y, bins=50, normed=1, color='green', histtype='step');  
plt.hist(test_y, bins=50, normed=1, color='red', histtype='step');  
plt.show()
```



```
In [8]: #Model 0: Base line Model:  $y_{test\_pred} = mean(y_{train\_i})$ 
train_mean_y = np.mean(train_y)

print('Test_MSE(MEAN):%f' % np.mean(np.square(test_y-train_mean_y)) )

print('Test_MSE(ZERO):%f' % np.mean(np.square(test_y-0.0)) )

Test_MSE(MEAN):0.191127
Test_MSE(ZERO):0.190891
```

3. Model Architecture

```
In [9]: def weight_variable(shape):
        initial = tf.truncated_normal(shape, stddev=0.1)
        return tf.Variable(initial)

def bias_variable(shape):
    initial = tf.constant(0.1, shape=shape)
    return tf.Variable(initial)

def conv2d(x, W, stride):
    return tf.nn.conv2d(x, W, strides=[1, stride, stride, 1], padding='VALID')

x = tf.placeholder(tf.float32, shape=[None, 66, 200, 3])
y_ = tf.placeholder(tf.float32, shape=[None, 1])

x_image = x

#first convolutional layer
W_conv1 = weight_variable([5, 5, 3, 24])
b_conv1 = bias_variable([24])

h_conv1 = tf.nn.relu(conv2d(x_image, W_conv1, 2) + b_conv1)

#second convolutional layer
W_conv2 = weight_variable([5, 5, 24, 36])
b_conv2 = bias_variable([36])

h_conv2 = tf.nn.relu(conv2d(h_conv1, W_conv2, 2) + b_conv2)

#third convolutional layer
W_conv3 = weight_variable([5, 5, 36, 48])
b_conv3 = bias_variable([48])

h_conv3 = tf.nn.relu(conv2d(h_conv2, W_conv3, 2) + b_conv3)

#fourth convolutional layer
W_conv4 = weight_variable([3, 3, 48, 64])
b_conv4 = bias_variable([64])

h_conv4 = tf.nn.relu(conv2d(h_conv3, W_conv4, 1) + b_conv4)

#fifth convolutional layer
W_conv5 = weight_variable([3, 3, 64, 64])
```

```
b_conv5 = bias_variable([64])

h_conv5 = tf.nn.relu(conv2d(h_conv4, W_conv5, 1) + b_conv5)

#FCL 1
W_fc1 = weight_variable([1152, 1164])
b_fc1 = bias_variable([1164])

h_conv5_flat = tf.reshape(h_conv5, [-1, 1152])
h_fc1 = tf.nn.relu(tf.matmul(h_conv5_flat, W_fc1) + b_fc1)

keep_prob = tf.placeholder(tf.float32)
h_fc1_drop = tf.nn.dropout(h_fc1, keep_prob)

#FCL 2
W_fc2 = weight_variable([1164, 100])
b_fc2 = bias_variable([100])

h_fc2 = tf.nn.relu(tf.matmul(h_fc1_drop, W_fc2) + b_fc2)

h_fc2_drop = tf.nn.dropout(h_fc2, keep_prob)

#FCL 3
W_fc3 = weight_variable([100, 50])
b_fc3 = bias_variable([50])

h_fc3 = tf.nn.relu(tf.matmul(h_fc2_drop, W_fc3) + b_fc3)

h_fc3_drop = tf.nn.dropout(h_fc3, keep_prob)

#FCL 3
W_fc4 = weight_variable([50, 10])
b_fc4 = bias_variable([10])

h_fc4 = tf.nn.relu(tf.matmul(h_fc3_drop, W_fc4) + b_fc4)

h_fc4_drop = tf.nn.dropout(h_fc4, keep_prob)

#Output
W_fc5 = weight_variable([10, 1])
b_fc5 = bias_variable([1])

y = tf.identity(tf.matmul(h_fc4_drop, W_fc5) + b_fc5)
```

4.Training the Model

```
In [11]: LOGDIR = './save'

sess = tf.InteractiveSession()

L2NormConst = 0.001

train_vars = tf.trainable_variables()

loss = tf.reduce_mean(tf.square(tf.subtract(model.y_, model.y))) + tf.add_n([tf.nn.l2_loss(v) for v in train_
vars]) * L2NormConst
train_step = tf.train.AdamOptimizer(1e-4).minimize(loss)
sess.run(tf.initialize_all_variables())

# create a summary to monitor cost tensor
tf.summary.scalar("loss", loss)
# merge all summaries into a single op
merged_summary_op = tf.summary.merge_all()

saver = tf.train.Saver(write_version = saver_pb2.SaverDef.V1)

# op to write logs to Tensorboard
logs_path = './logs'
summary_writer = tf.summary.FileWriter(logs_path, graph=tf.get_default_graph())

epochs = 30
batch_size = 100

# train over the dataset about 30 times
for epoch in range(epochs):
    for i in range(int(driving_data.num_images/batch_size)):
        xs, ys = driving_data.LoadTrainBatch(batch_size)
        train_step.run(feed_dict={model.x: xs, model.y_: ys, model.keep_prob: 0.5})
        if i % 10 == 0:
            xs, ys = driving_data.LoadValBatch(batch_size)
            loss_value = loss.eval(feed_dict={model.x:xs, model.y_: ys, model.keep_prob: 0.5})
            print("Epoch: %d, Step: %d, Loss: %g" % (epoch, epoch * batch_size + i, loss_value))

    # write logs at every iteration
    summary = merged_summary_op.eval(feed_dict={model.x:xs, model.y_: ys, model.keep_prob: 0.5})
    summary_writer.add_summary(summary, epoch * driving_data.num_images/batch_size + i)

    if i % batch_size == 0:
```

```
if not os.path.exists(LOGDIR):
    os.makedirs(LOGDIR)
checkpoint_path = os.path.join(LOGDIR, "model.ckpt")
filename = saver.save(sess, checkpoint_path)
print("Model saved in file: %s" % filename)

print("Run the command line:\n" \
      "--> tensorboard --logdir=./logs " \
      "\nThen open http://0.0.0.0:6006/ into your web browser")
```



```
Epoch: 0, Step: 0, Loss: 15.5241
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 0, Step: 10, Loss: 13.3961
Epoch: 0, Step: 20, Loss: 12.5071
Epoch: 0, Step: 30, Loss: 12.1788
Epoch: 0, Step: 40, Loss: 11.9118
Epoch: 0, Step: 50, Loss: 11.6858
Epoch: 0, Step: 60, Loss: 11.4448
Epoch: 0, Step: 70, Loss: 11.2974
Epoch: 0, Step: 80, Loss: 11.1432
Epoch: 0, Step: 90, Loss: 10.9986
Epoch: 0, Step: 100, Loss: 10.7833
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 0, Step: 110, Loss: 10.716
Epoch: 0, Step: 120, Loss: 10.8449
Epoch: 0, Step: 130, Loss: 15.9167
Epoch: 0, Step: 140, Loss: 10.2533
Epoch: 0, Step: 150, Loss: 10.1015
Epoch: 0, Step: 160, Loss: 9.9963
Epoch: 0, Step: 170, Loss: 9.85669
Epoch: 0, Step: 180, Loss: 9.77012
Epoch: 0, Step: 190, Loss: 9.59333
Epoch: 0, Step: 200, Loss: 9.64264
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 0, Step: 210, Loss: 9.40897
Epoch: 0, Step: 220, Loss: 9.22508
Epoch: 0, Step: 230, Loss: 9.18925
Epoch: 0, Step: 240, Loss: 8.99531
```

```
Epoch: 0, Step: 250, Loss: 8.91717
Epoch: 0, Step: 260, Loss: 8.79232
Epoch: 0, Step: 270, Loss: 8.75237
Epoch: 0, Step: 280, Loss: 8.64017
Epoch: 0, Step: 290, Loss: 8.65393
Epoch: 0, Step: 300, Loss: 8.44487
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 0, Step: 310, Loss: 8.26949
Epoch: 0, Step: 320, Loss: 8.16109
Epoch: 0, Step: 330, Loss: 8.06285
Epoch: 0, Step: 340, Loss: 7.97784
Epoch: 0, Step: 350, Loss: 7.88002
Epoch: 0, Step: 360, Loss: 7.78918
Epoch: 0, Step: 370, Loss: 7.69777
Epoch: 0, Step: 380, Loss: 7.61205
Epoch: 0, Step: 390, Loss: 7.52466
Epoch: 0, Step: 400, Loss: 7.43561
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 0, Step: 410, Loss: 7.34939
Epoch: 0, Step: 420, Loss: 7.25356
Epoch: 0, Step: 430, Loss: 7.21515
Epoch: 0, Step: 440, Loss: 7.11122
Epoch: 0, Step: 450, Loss: 7.30774
Model saved in file: ./save\model.ckpt
Epoch: 1, Step: 100, Loss: 7.49554
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 1, Step: 110, Loss: 7.08805
Epoch: 1, Step: 120, Loss: 6.85276
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Epoch: 1, Step: 130, Loss: 6.76512
Epoch: 1, Step: 140, Loss: 6.70045
Epoch: 1, Step: 150, Loss: 6.76679
Epoch: 1, Step: 160, Loss: 7.64387
Epoch: 1, Step: 170, Loss: 7.91397
Epoch: 1, Step: 180, Loss: 6.44679
Epoch: 1, Step: 190, Loss: 6.41221
Epoch: 1, Step: 200, Loss: 6.23535
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 1, Step: 210, Loss: 6.17904
Epoch: 1, Step: 220, Loss: 6.10987
Epoch: 1, Step: 230, Loss: 6.06248
Epoch: 1, Step: 240, Loss: 6.0365
Epoch: 1, Step: 250, Loss: 5.93431
Epoch: 1, Step: 260, Loss: 5.84508
Epoch: 1, Step: 270, Loss: 5.85592
Epoch: 1, Step: 280, Loss: 6.12068
Epoch: 1, Step: 290, Loss: 5.75997
Epoch: 1, Step: 300, Loss: 5.66852
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 1, Step: 310, Loss: 5.52494
Epoch: 1, Step: 320, Loss: 5.46413
Epoch: 1, Step: 330, Loss: 5.40421
Epoch: 1, Step: 340, Loss: 5.35312
Epoch: 1, Step: 350, Loss: 5.36227
Epoch: 1, Step: 360, Loss: 10.8736
Epoch: 1, Step: 370, Loss: 5.404
Epoch: 1, Step: 380, Loss: 5.13758
Epoch: 1, Step: 390, Loss: 5.07918
Epoch: 1, Step: 400, Loss: 5.02711
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
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WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 1, Step: 410, Loss: 4.9774  
Epoch: 1, Step: 420, Loss: 4.91923  
Epoch: 1, Step: 430, Loss: 4.88423  
Epoch: 1, Step: 440, Loss: 4.83042  
Epoch: 1, Step: 450, Loss: 4.77965  
Epoch: 1, Step: 460, Loss: 4.73402  
Epoch: 1, Step: 470, Loss: 4.68781  
Epoch: 1, Step: 480, Loss: 4.63934  
Epoch: 1, Step: 490, Loss: 4.60084  
Epoch: 1, Step: 500, Loss: 4.55033  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 1, Step: 510, Loss: 4.50089  
Epoch: 1, Step: 520, Loss: 4.45024  
Epoch: 1, Step: 530, Loss: 4.40861  
Epoch: 1, Step: 540, Loss: 4.3624  
Epoch: 1, Step: 550, Loss: 4.32085  
Model saved in file: ./save\model.ckpt  
Epoch: 2, Step: 200, Loss: 4.30622  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 2, Step: 210, Loss: 4.26017  
Epoch: 2, Step: 220, Loss: 4.22086  
Epoch: 2, Step: 230, Loss: 4.18435  
Epoch: 2, Step: 240, Loss: 4.1412  
Epoch: 2, Step: 250, Loss: 4.10019  
Epoch: 2, Step: 260, Loss: 4.06475  
Epoch: 2, Step: 270, Loss: 4.02016  
Epoch: 2, Step: 280, Loss: 3.98617  
Epoch: 2, Step: 290, Loss: 3.9548  
Epoch: 2, Step: 300, Loss: 3.97099  
WARNING:tensorflow:*****
```

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WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 2, Step: 310, Loss: 5.4913
Epoch: 2, Step: 320, Loss: 7.97354
Epoch: 2, Step: 330, Loss: 3.81272
Epoch: 2, Step: 340, Loss: 3.77058
Epoch: 2, Step: 350, Loss: 3.75504
Epoch: 2, Step: 360, Loss: 3.72259
Epoch: 2, Step: 370, Loss: 3.68722
Epoch: 2, Step: 380, Loss: 3.66794
Epoch: 2, Step: 390, Loss: 3.77958
Epoch: 2, Step: 400, Loss: 3.57725
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 2, Step: 410, Loss: 3.54622
Epoch: 2, Step: 420, Loss: 3.54936
Epoch: 2, Step: 430, Loss: 3.46816
Epoch: 2, Step: 440, Loss: 3.45469
Epoch: 2, Step: 450, Loss: 3.45487
Epoch: 2, Step: 460, Loss: 3.45285
Epoch: 2, Step: 470, Loss: 3.43185
Epoch: 2, Step: 480, Loss: 3.46615
Epoch: 2, Step: 490, Loss: 3.31289
Epoch: 2, Step: 500, Loss: 3.28079
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 2, Step: 510, Loss: 3.23399
Epoch: 2, Step: 520, Loss: 3.20449
Epoch: 2, Step: 530, Loss: 3.18097
Epoch: 2, Step: 540, Loss: 3.15358
Epoch: 2, Step: 550, Loss: 3.12921
Epoch: 2, Step: 560, Loss: 3.09904
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Epoch: 2, Step: 570, Loss: 3.08411
Epoch: 2, Step: 580, Loss: 3.04866
Epoch: 2, Step: 590, Loss: 3.02607
Epoch: 2, Step: 600, Loss: 2.98919
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 2, Step: 610, Loss: 2.97379
Epoch: 2, Step: 620, Loss: 3.00013
Epoch: 2, Step: 630, Loss: 2.92104
Epoch: 2, Step: 640, Loss: 3.31597
Epoch: 2, Step: 650, Loss: 3.39228
Model saved in file: ./save\model.ckpt
Epoch: 3, Step: 300, Loss: 3.02397
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 3, Step: 310, Loss: 2.85791
Epoch: 3, Step: 320, Loss: 2.82324
Epoch: 3, Step: 330, Loss: 2.82884
Epoch: 3, Step: 340, Loss: 2.9863
Epoch: 3, Step: 350, Loss: 4.18077
Epoch: 3, Step: 360, Loss: 3.84868
Epoch: 3, Step: 370, Loss: 2.73976
Epoch: 3, Step: 380, Loss: 2.72699
Epoch: 3, Step: 390, Loss: 2.66222
Epoch: 3, Step: 400, Loss: 2.6503
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 3, Step: 410, Loss: 2.623
Epoch: 3, Step: 420, Loss: 2.62747
Epoch: 3, Step: 430, Loss: 2.65332
Epoch: 3, Step: 440, Loss: 2.56587
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Epoch: 3, Step: 450, Loss: 2.56177
Epoch: 3, Step: 460, Loss: 2.62547
Epoch: 3, Step: 470, Loss: 2.88868
Epoch: 3, Step: 480, Loss: 2.68203
Epoch: 3, Step: 490, Loss: 2.46609
Epoch: 3, Step: 500, Loss: 2.44208
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 3, Step: 510, Loss: 2.4225
Epoch: 3, Step: 520, Loss: 2.4059
Epoch: 3, Step: 530, Loss: 2.38936
Epoch: 3, Step: 540, Loss: 2.87832
Epoch: 3, Step: 550, Loss: 7.48041
Epoch: 3, Step: 560, Loss: 2.37541
Epoch: 3, Step: 570, Loss: 2.32222
Epoch: 3, Step: 580, Loss: 2.30135
Epoch: 3, Step: 590, Loss: 2.28379
Epoch: 3, Step: 600, Loss: 2.26974
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 3, Step: 610, Loss: 2.25094
Epoch: 3, Step: 620, Loss: 2.24168
Epoch: 3, Step: 630, Loss: 2.22285
Epoch: 3, Step: 640, Loss: 2.2097
Epoch: 3, Step: 650, Loss: 2.19232
Epoch: 3, Step: 660, Loss: 2.18713
Epoch: 3, Step: 670, Loss: 2.16563
Epoch: 3, Step: 680, Loss: 2.14922
Epoch: 3, Step: 690, Loss: 2.13992
Epoch: 3, Step: 700, Loss: 2.12142
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.

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WARNING:tensorflow:*****
Epoch: 3, Step: 710, Loss: 2.10627
Epoch: 3, Step: 720, Loss: 2.09087
Epoch: 3, Step: 730, Loss: 2.07833
Epoch: 3, Step: 740, Loss: 2.06174
Epoch: 3, Step: 750, Loss: 2.04933
Model saved in file: ./save\model.ckpt
Epoch: 4, Step: 400, Loss: 2.04106
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 4, Step: 410, Loss: 2.03453
Epoch: 4, Step: 420, Loss: 2.01923
Epoch: 4, Step: 430, Loss: 2.00407
Epoch: 4, Step: 440, Loss: 1.98537
Epoch: 4, Step: 450, Loss: 1.97527
Epoch: 4, Step: 460, Loss: 1.95994
Epoch: 4, Step: 470, Loss: 1.94775
Epoch: 4, Step: 480, Loss: 1.94647
Epoch: 4, Step: 490, Loss: 1.98528
Epoch: 4, Step: 500, Loss: 4.72371
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 4, Step: 510, Loss: 4.79448
Epoch: 4, Step: 520, Loss: 1.88484
Epoch: 4, Step: 530, Loss: 1.86841
Epoch: 4, Step: 540, Loss: 1.89978
Epoch: 4, Step: 550, Loss: 1.87612
Epoch: 4, Step: 560, Loss: 1.86243
Epoch: 4, Step: 570, Loss: 1.87357
Epoch: 4, Step: 580, Loss: 1.92911
Epoch: 4, Step: 590, Loss: 1.80692
Epoch: 4, Step: 600, Loss: 1.8127
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
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WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 4, Step: 610, Loss: 1.80717  
Epoch: 4, Step: 620, Loss: 1.787  
Epoch: 4, Step: 630, Loss: 1.78274  
Epoch: 4, Step: 640, Loss: 1.80955  
Epoch: 4, Step: 650, Loss: 1.7795  
Epoch: 4, Step: 660, Loss: 1.82037  
Epoch: 4, Step: 670, Loss: 1.78296  
Epoch: 4, Step: 680, Loss: 1.73944  
Epoch: 4, Step: 690, Loss: 1.70716  
Epoch: 4, Step: 700, Loss: 1.69635  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 4, Step: 710, Loss: 1.6708  
Epoch: 4, Step: 720, Loss: 1.66121  
Epoch: 4, Step: 730, Loss: 1.65261  
Epoch: 4, Step: 740, Loss: 1.64504  
Epoch: 4, Step: 750, Loss: 1.63111  
Epoch: 4, Step: 760, Loss: 1.62995  
Epoch: 4, Step: 770, Loss: 1.61309  
Epoch: 4, Step: 780, Loss: 1.60537  
Epoch: 4, Step: 790, Loss: 1.60074  
Epoch: 4, Step: 800, Loss: 1.59244  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 4, Step: 810, Loss: 1.60883  
Epoch: 4, Step: 820, Loss: 1.59788  
Epoch: 4, Step: 830, Loss: 2.03273  
Epoch: 4, Step: 840, Loss: 1.96011  
Epoch: 4, Step: 850, Loss: 1.64961  
Model saved in file: ./save\model.ckpt  
Epoch: 5, Step: 500, Loss: 1.55377  
WARNING:tensorflow:*****
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WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 5, Step: 510, Loss: 1.53842
Epoch: 5, Step: 520, Loss: 1.57081
Epoch: 5, Step: 530, Loss: 1.83643
Epoch: 5, Step: 540, Loss: 2.86389
Epoch: 5, Step: 550, Loss: 2.19455
Epoch: 5, Step: 560, Loss: 1.54686
Epoch: 5, Step: 570, Loss: 1.49608
Epoch: 5, Step: 580, Loss: 1.4713
Epoch: 5, Step: 590, Loss: 1.46228
Epoch: 5, Step: 600, Loss: 1.45835
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 5, Step: 610, Loss: 1.46903
Epoch: 5, Step: 620, Loss: 1.49229
Epoch: 5, Step: 630, Loss: 1.47338
Epoch: 5, Step: 640, Loss: 1.50363
Epoch: 5, Step: 650, Loss: 1.54196
Epoch: 5, Step: 660, Loss: 1.86688
Epoch: 5, Step: 670, Loss: 2.06586
Epoch: 5, Step: 680, Loss: 1.41313
Epoch: 5, Step: 690, Loss: 1.39052
Epoch: 5, Step: 700, Loss: 1.41001
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 5, Step: 710, Loss: 1.37112
Epoch: 5, Step: 720, Loss: 1.38335
Epoch: 5, Step: 730, Loss: 3.02761
Epoch: 5, Step: 740, Loss: 5.56764
Epoch: 5, Step: 750, Loss: 1.35435
Epoch: 5, Step: 760, Loss: 1.33944
```

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Epoch: 5, Step: 770, Loss: 1.32198
Epoch: 5, Step: 780, Loss: 1.31544
Epoch: 5, Step: 790, Loss: 1.31178
Epoch: 5, Step: 800, Loss: 1.30442
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 5, Step: 810, Loss: 1.3044
Epoch: 5, Step: 820, Loss: 1.29713
Epoch: 5, Step: 830, Loss: 1.29017
Epoch: 5, Step: 840, Loss: 1.27759
Epoch: 5, Step: 850, Loss: 1.27463
Epoch: 5, Step: 860, Loss: 1.279
Epoch: 5, Step: 870, Loss: 1.26989
Epoch: 5, Step: 880, Loss: 1.25585
Epoch: 5, Step: 890, Loss: 1.24077
Epoch: 5, Step: 900, Loss: 1.2362
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 5, Step: 910, Loss: 1.2292
Epoch: 5, Step: 920, Loss: 1.22318
Epoch: 5, Step: 930, Loss: 1.21745
Epoch: 5, Step: 940, Loss: 1.21438
Epoch: 5, Step: 950, Loss: 1.21497
Model saved in file: ./save\model.ckpt
Epoch: 6, Step: 600, Loss: 1.22322
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 6, Step: 610, Loss: 1.21188
Epoch: 6, Step: 620, Loss: 1.20641
Epoch: 6, Step: 630, Loss: 1.19281
Epoch: 6, Step: 640, Loss: 1.19336
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Epoch: 6, Step: 650, Loss: 1.18606
Epoch: 6, Step: 660, Loss: 1.17296
Epoch: 6, Step: 670, Loss: 1.25362
Epoch: 6, Step: 680, Loss: 1.27895
Epoch: 6, Step: 690, Loss: 5.45052
Epoch: 6, Step: 700, Loss: 2.96511
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 6, Step: 710, Loss: 1.17616
Epoch: 6, Step: 720, Loss: 1.1429
Epoch: 6, Step: 730, Loss: 1.1658
Epoch: 6, Step: 740, Loss: 1.14906
Epoch: 6, Step: 750, Loss: 1.12535
Epoch: 6, Step: 760, Loss: 1.20522
Epoch: 6, Step: 770, Loss: 1.19869
Epoch: 6, Step: 780, Loss: 1.0977
Epoch: 6, Step: 790, Loss: 1.12167
Epoch: 6, Step: 800, Loss: 1.10292
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 6, Step: 810, Loss: 1.10303
Epoch: 6, Step: 820, Loss: 1.0838
Epoch: 6, Step: 830, Loss: 1.15165
Epoch: 6, Step: 840, Loss: 1.10763
Epoch: 6, Step: 850, Loss: 1.164
Epoch: 6, Step: 860, Loss: 1.12953
Epoch: 6, Step: 870, Loss: 1.0922
Epoch: 6, Step: 880, Loss: 1.06149
Epoch: 6, Step: 890, Loss: 1.04818
Epoch: 6, Step: 900, Loss: 1.04747
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.

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WARNING:tensorflow:*****
Epoch: 6, Step: 910, Loss: 1.03991
Epoch: 6, Step: 920, Loss: 1.03418
Epoch: 6, Step: 930, Loss: 1.0298
Epoch: 6, Step: 940, Loss: 1.02165
Epoch: 6, Step: 950, Loss: 1.03239
Epoch: 6, Step: 960, Loss: 1.01195
Epoch: 6, Step: 970, Loss: 1.02186
Epoch: 6, Step: 980, Loss: 1.05139
Epoch: 6, Step: 990, Loss: 1.00928
Epoch: 6, Step: 1000, Loss: 1.01731
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 6, Step: 1010, Loss: 1.09363
Epoch: 6, Step: 1020, Loss: 1.35915
Epoch: 6, Step: 1030, Loss: 1.26133
Epoch: 6, Step: 1040, Loss: 1.0731
Epoch: 6, Step: 1050, Loss: 0.981346
Model saved in file: ./save\model.ckpt
Epoch: 7, Step: 700, Loss: 0.982006
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 7, Step: 710, Loss: 1.03647
Epoch: 7, Step: 720, Loss: 1.41854
Epoch: 7, Step: 730, Loss: 1.88705
Epoch: 7, Step: 740, Loss: 1.34706
Epoch: 7, Step: 750, Loss: 1.01568
Epoch: 7, Step: 760, Loss: 0.93948
Epoch: 7, Step: 770, Loss: 0.95456
Epoch: 7, Step: 780, Loss: 0.956962
Epoch: 7, Step: 790, Loss: 0.938444
Epoch: 7, Step: 800, Loss: 0.952011
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
```

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WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 7, Step: 810, Loss: 0.983906  
Epoch: 7, Step: 820, Loss: 0.920264  
Epoch: 7, Step: 830, Loss: 0.994416  
Epoch: 7, Step: 840, Loss: 1.14677  
Epoch: 7, Step: 850, Loss: 1.1256  
Epoch: 7, Step: 860, Loss: 1.14916  
Epoch: 7, Step: 870, Loss: 0.914477  
Epoch: 7, Step: 880, Loss: 0.895128  
Epoch: 7, Step: 890, Loss: 0.88725  
Epoch: 7, Step: 900, Loss: 0.880331  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 7, Step: 910, Loss: 0.900509  
Epoch: 7, Step: 920, Loss: 3.71423  
Epoch: 7, Step: 930, Loss: 3.4737  
Epoch: 7, Step: 940, Loss: 0.867999  
Epoch: 7, Step: 950, Loss: 0.857705  
Epoch: 7, Step: 960, Loss: 0.852186  
Epoch: 7, Step: 970, Loss: 0.869167  
Epoch: 7, Step: 980, Loss: 0.892392  
Epoch: 7, Step: 990, Loss: 0.872766  
Epoch: 7, Step: 1000, Loss: 0.843036  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 7, Step: 1010, Loss: 0.852721  
Epoch: 7, Step: 1020, Loss: 0.855012  
Epoch: 7, Step: 1030, Loss: 0.868096  
Epoch: 7, Step: 1040, Loss: 0.882475  
Epoch: 7, Step: 1050, Loss: 0.872923  
Epoch: 7, Step: 1060, Loss: 0.8934  
Epoch: 7, Step: 1070, Loss: 0.86857  
Epoch: 7, Step: 1080, Loss: 0.982092
```

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Epoch: 7, Step: 1090, Loss: 1.02329
Epoch: 7, Step: 1100, Loss: 0.846341
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 7, Step: 1110, Loss: 0.84636
Epoch: 7, Step: 1120, Loss: 0.814248
Epoch: 7, Step: 1130, Loss: 0.79112
Epoch: 7, Step: 1140, Loss: 0.792586
Epoch: 7, Step: 1150, Loss: 0.801342
Model saved in file: ./save\model.ckpt
Epoch: 8, Step: 800, Loss: 0.789255
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 8, Step: 810, Loss: 0.790869
Epoch: 8, Step: 820, Loss: 0.777916
Epoch: 8, Step: 830, Loss: 0.773348
Epoch: 8, Step: 840, Loss: 0.771256
Epoch: 8, Step: 850, Loss: 0.770914
Epoch: 8, Step: 860, Loss: 0.808627
Epoch: 8, Step: 870, Loss: 0.810654
Epoch: 8, Step: 880, Loss: 5.83206
Epoch: 8, Step: 890, Loss: 1.18698
Epoch: 8, Step: 900, Loss: 0.751283
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 8, Step: 910, Loss: 0.760249
Epoch: 8, Step: 920, Loss: 0.792659
Epoch: 8, Step: 930, Loss: 0.799778
Epoch: 8, Step: 940, Loss: 0.742641
Epoch: 8, Step: 950, Loss: 0.83783
Epoch: 8, Step: 960, Loss: 0.806656
```

Epoch: 8, Step: 970, Loss: 0.728825
Epoch: 8, Step: 980, Loss: 0.747277
Epoch: 8, Step: 990, Loss: 0.797215
Epoch: 8, Step: 1000, Loss: 0.765192
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 8, Step: 1010, Loss: 0.732722
Epoch: 8, Step: 1020, Loss: 0.772951
Epoch: 8, Step: 1030, Loss: 0.740001
Epoch: 8, Step: 1040, Loss: 0.785114
Epoch: 8, Step: 1050, Loss: 0.796882
Epoch: 8, Step: 1060, Loss: 0.837435
Epoch: 8, Step: 1070, Loss: 0.72581
Epoch: 8, Step: 1080, Loss: 0.801875
Epoch: 8, Step: 1090, Loss: 0.851624
Epoch: 8, Step: 1100, Loss: 0.708555
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 8, Step: 1110, Loss: 0.711015
Epoch: 8, Step: 1120, Loss: 0.692214
Epoch: 8, Step: 1130, Loss: 0.686016
Epoch: 8, Step: 1140, Loss: 0.70474
Epoch: 8, Step: 1150, Loss: 0.689869
Epoch: 8, Step: 1160, Loss: 0.679069
Epoch: 8, Step: 1170, Loss: 0.677988
Epoch: 8, Step: 1180, Loss: 0.722484
Epoch: 8, Step: 1190, Loss: 0.689645
Epoch: 8, Step: 1200, Loss: 0.88281
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 8, Step: 1210, Loss: 1.1026

Epoch: 8, Step: 1220, Loss: 0.908248
Epoch: 8, Step: 1230, Loss: 0.735102
Epoch: 8, Step: 1240, Loss: 0.687875
Epoch: 8, Step: 1250, Loss: 0.653859
Model saved in file: ./save\model.ckpt
Epoch: 9, Step: 900, Loss: 0.75267
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 9, Step: 910, Loss: 1.4359
Epoch: 9, Step: 920, Loss: 2.10821
Epoch: 9, Step: 930, Loss: 0.882168
Epoch: 9, Step: 940, Loss: 0.738837
Epoch: 9, Step: 950, Loss: 0.630324
Epoch: 9, Step: 960, Loss: 0.633942
Epoch: 9, Step: 970, Loss: 0.626689
Epoch: 9, Step: 980, Loss: 0.633765
Epoch: 9, Step: 990, Loss: 0.645681
Epoch: 9, Step: 1000, Loss: 0.668385
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 9, Step: 1010, Loss: 0.628126
Epoch: 9, Step: 1020, Loss: 0.747587
Epoch: 9, Step: 1030, Loss: 1.01473
Epoch: 9, Step: 1040, Loss: 0.942834
Epoch: 9, Step: 1050, Loss: 1.0327
Epoch: 9, Step: 1060, Loss: 0.652981
Epoch: 9, Step: 1070, Loss: 0.669958
Epoch: 9, Step: 1080, Loss: 0.63311
Epoch: 9, Step: 1090, Loss: 0.698168
Epoch: 9, Step: 1100, Loss: 0.626409
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.

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WARNING:tensorflow:*****
Epoch: 9, Step: 1110, Loss: 5.29876
Epoch: 9, Step: 1120, Loss: 1.7383
Epoch: 9, Step: 1130, Loss: 0.672997
Epoch: 9, Step: 1140, Loss: 0.586495
Epoch: 9, Step: 1150, Loss: 0.579475
Epoch: 9, Step: 1160, Loss: 0.582251
Epoch: 9, Step: 1170, Loss: 0.578255
Epoch: 9, Step: 1180, Loss: 0.585359
Epoch: 9, Step: 1190, Loss: 0.575497
Epoch: 9, Step: 1200, Loss: 0.57121
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 9, Step: 1210, Loss: 0.574998
Epoch: 9, Step: 1220, Loss: 0.58097
Epoch: 9, Step: 1230, Loss: 0.567344
Epoch: 9, Step: 1240, Loss: 0.575644
Epoch: 9, Step: 1250, Loss: 0.565858
Epoch: 9, Step: 1260, Loss: 0.564139
Epoch: 9, Step: 1270, Loss: 0.552802
Epoch: 9, Step: 1280, Loss: 0.552769
Epoch: 9, Step: 1290, Loss: 0.549371
Epoch: 9, Step: 1300, Loss: 0.545533
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 9, Step: 1310, Loss: 0.544449
Epoch: 9, Step: 1320, Loss: 0.541135
Epoch: 9, Step: 1330, Loss: 0.544851
Epoch: 9, Step: 1340, Loss: 0.593716
Epoch: 9, Step: 1350, Loss: 0.681353
Model saved in file: ./save\model.ckpt
Epoch: 10, Step: 1000, Loss: 0.634885
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
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WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 10, Step: 1010, Loss: 0.555838  
Epoch: 10, Step: 1020, Loss: 0.570534  
Epoch: 10, Step: 1030, Loss: 0.57253  
Epoch: 10, Step: 1040, Loss: 0.549661  
Epoch: 10, Step: 1050, Loss: 0.715407  
Epoch: 10, Step: 1060, Loss: 0.733542  
Epoch: 10, Step: 1070, Loss: 6.49184  
Epoch: 10, Step: 1080, Loss: 0.636641  
Epoch: 10, Step: 1090, Loss: 0.53023  
Epoch: 10, Step: 1100, Loss: 0.725676  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 10, Step: 1110, Loss: 1.33905  
Epoch: 10, Step: 1120, Loss: 0.566228  
Epoch: 10, Step: 1130, Loss: 0.509651  
Epoch: 10, Step: 1140, Loss: 0.669934  
Epoch: 10, Step: 1150, Loss: 0.546396  
Epoch: 10, Step: 1160, Loss: 0.502529  
Epoch: 10, Step: 1170, Loss: 0.562176  
Epoch: 10, Step: 1180, Loss: 0.50596  
Epoch: 10, Step: 1190, Loss: 0.517386  
Epoch: 10, Step: 1200, Loss: 0.519779  
WARNING:tensorflow:*****  
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.  
WARNING:tensorflow:Consider switching to the more efficient V2 format:  
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`  
WARNING:tensorflow:now on by default.  
WARNING:tensorflow:*****  
Epoch: 10, Step: 1210, Loss: 0.600917  
Epoch: 10, Step: 1220, Loss: 0.525176  
Epoch: 10, Step: 1230, Loss: 0.599789  
Epoch: 10, Step: 1240, Loss: 0.537248  
Epoch: 10, Step: 1250, Loss: 0.52029  
Epoch: 10, Step: 1260, Loss: 0.50688  
Epoch: 10, Step: 1270, Loss: 0.50036  
Epoch: 10, Step: 1280, Loss: 0.497906
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Epoch: 10, Step: 1290, Loss: 0.496889
Epoch: 10, Step: 1300, Loss: 0.498183
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 10, Step: 1310, Loss: 0.493517
Epoch: 10, Step: 1320, Loss: 0.493025
Epoch: 10, Step: 1330, Loss: 0.492889
Epoch: 10, Step: 1340, Loss: 0.491947
Epoch: 10, Step: 1350, Loss: 0.474454
Epoch: 10, Step: 1360, Loss: 0.568854
Epoch: 10, Step: 1370, Loss: 0.528629
Epoch: 10, Step: 1380, Loss: 0.653924
Epoch: 10, Step: 1390, Loss: 0.561783
Epoch: 10, Step: 1400, Loss: 0.71474
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 10, Step: 1410, Loss: 0.631075
Epoch: 10, Step: 1420, Loss: 0.540521
Epoch: 10, Step: 1430, Loss: 0.471832
Epoch: 10, Step: 1440, Loss: 0.465705
Epoch: 10, Step: 1450, Loss: 0.520285
Model saved in file: ./save\model.ckpt
Epoch: 11, Step: 1100, Loss: 0.792229
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 11, Step: 1110, Loss: 0.889595
Epoch: 11, Step: 1120, Loss: 0.839731
Epoch: 11, Step: 1130, Loss: 0.503075
Epoch: 11, Step: 1140, Loss: 0.444806
Epoch: 11, Step: 1150, Loss: 0.468857
Epoch: 11, Step: 1160, Loss: 0.447976
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Epoch: 11, Step: 1170, Loss: 0.454622
Epoch: 11, Step: 1180, Loss: 0.489803
Epoch: 11, Step: 1190, Loss: 0.471576
Epoch: 11, Step: 1200, Loss: 0.442563
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 11, Step: 1210, Loss: 0.565119
Epoch: 11, Step: 1220, Loss: 0.828987
Epoch: 11, Step: 1230, Loss: 0.562269
Epoch: 11, Step: 1240, Loss: 0.600159
Epoch: 11, Step: 1250, Loss: 0.443503
Epoch: 11, Step: 1260, Loss: 0.443782
Epoch: 11, Step: 1270, Loss: 0.449783
Epoch: 11, Step: 1280, Loss: 0.456365
Epoch: 11, Step: 1290, Loss: 0.469045
Epoch: 11, Step: 1300, Loss: 5.61568
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 11, Step: 1310, Loss: 0.654688
Epoch: 11, Step: 1320, Loss: 0.425505
Epoch: 11, Step: 1330, Loss: 0.41675
Epoch: 11, Step: 1340, Loss: 0.418501
Epoch: 11, Step: 1350, Loss: 0.422851
Epoch: 11, Step: 1360, Loss: 0.411887
Epoch: 11, Step: 1370, Loss: 0.557175
Epoch: 11, Step: 1380, Loss: 0.424425
Epoch: 11, Step: 1390, Loss: 0.432192
Epoch: 11, Step: 1400, Loss: 0.464829
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 11, Step: 1410, Loss: 0.579071

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Epoch: 11, Step: 1420, Loss: 0.432414
Epoch: 11, Step: 1430, Loss: 0.441916
Epoch: 11, Step: 1440, Loss: 0.444049
Epoch: 11, Step: 1450, Loss: 0.433238
Epoch: 11, Step: 1460, Loss: 0.430453
Epoch: 11, Step: 1470, Loss: 0.579664
Epoch: 11, Step: 1480, Loss: 1.64491
Epoch: 11, Step: 1490, Loss: 0.962302
Epoch: 11, Step: 1500, Loss: 0.556242
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 11, Step: 1510, Loss: 0.770082
Epoch: 11, Step: 1520, Loss: 0.572503
Epoch: 11, Step: 1530, Loss: 0.392657
Epoch: 11, Step: 1540, Loss: 0.390951
Epoch: 11, Step: 1550, Loss: 0.389622
Model saved in file: ./save\model.ckpt
Epoch: 12, Step: 1200, Loss: 0.389337
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 12, Step: 1210, Loss: 0.387349
Epoch: 12, Step: 1220, Loss: 0.38587
Epoch: 12, Step: 1230, Loss: 0.385575
Epoch: 12, Step: 1240, Loss: 0.446184
Epoch: 12, Step: 1250, Loss: 1.51076
Epoch: 12, Step: 1260, Loss: 4.68159
Epoch: 12, Step: 1270, Loss: 0.385245
Epoch: 12, Step: 1280, Loss: 0.376624
Epoch: 12, Step: 1290, Loss: 0.419253
Epoch: 12, Step: 1300, Loss: 0.437648
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
```

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WARNING:tensorflow:*****
Epoch: 12, Step: 1310, Loss: 0.439651
Epoch: 12, Step: 1320, Loss: 0.387332
Epoch: 12, Step: 1330, Loss: 0.496217
Epoch: 12, Step: 1340, Loss: 0.388327
Epoch: 12, Step: 1350, Loss: 0.375885
Epoch: 12, Step: 1360, Loss: 0.405928
Epoch: 12, Step: 1370, Loss: 0.489016
Epoch: 12, Step: 1380, Loss: 0.39249
Epoch: 12, Step: 1390, Loss: 0.392971
Epoch: 12, Step: 1400, Loss: 0.398093
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 12, Step: 1410, Loss: 0.400719
Epoch: 12, Step: 1420, Loss: 0.431166
Epoch: 12, Step: 1430, Loss: 0.55122
Epoch: 12, Step: 1440, Loss: 0.473572
Epoch: 12, Step: 1450, Loss: 0.368849
Epoch: 12, Step: 1460, Loss: 0.431761
Epoch: 12, Step: 1470, Loss: 0.38497
Epoch: 12, Step: 1480, Loss: 0.617791
Epoch: 12, Step: 1490, Loss: 0.40819
Epoch: 12, Step: 1500, Loss: 0.384326
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 12, Step: 1510, Loss: 0.393708
Epoch: 12, Step: 1520, Loss: 0.428099
Epoch: 12, Step: 1530, Loss: 0.37517
Epoch: 12, Step: 1540, Loss: 0.355548
Epoch: 12, Step: 1550, Loss: 0.378054
Epoch: 12, Step: 1560, Loss: 0.434966
Epoch: 12, Step: 1570, Loss: 0.358053
Epoch: 12, Step: 1580, Loss: 0.787643
Epoch: 12, Step: 1590, Loss: 0.936395
Epoch: 12, Step: 1600, Loss: 0.539459
```

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WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 12, Step: 1610, Loss: 0.382666
Epoch: 12, Step: 1620, Loss: 0.370149
Epoch: 12, Step: 1630, Loss: 0.363845
Epoch: 12, Step: 1640, Loss: 0.504395
Epoch: 12, Step: 1650, Loss: 1.51219
Model saved in file: ./save\model.ckpt
Epoch: 13, Step: 1300, Loss: 1.40818
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 13, Step: 1310, Loss: 0.391012
Epoch: 13, Step: 1320, Loss: 0.434623
Epoch: 13, Step: 1330, Loss: 0.338713
Epoch: 13, Step: 1340, Loss: 0.341079
Epoch: 13, Step: 1350, Loss: 0.3442
Epoch: 13, Step: 1360, Loss: 0.35285
Epoch: 13, Step: 1370, Loss: 0.391886
Epoch: 13, Step: 1380, Loss: 0.344193
Epoch: 13, Step: 1390, Loss: 0.348088
Epoch: 13, Step: 1400, Loss: 0.465271
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 13, Step: 1410, Loss: 0.73014
Epoch: 13, Step: 1420, Loss: 0.609407
Epoch: 13, Step: 1430, Loss: 0.360723
Epoch: 13, Step: 1440, Loss: 0.363816
Epoch: 13, Step: 1450, Loss: 0.374943
Epoch: 13, Step: 1460, Loss: 0.414278
Epoch: 13, Step: 1470, Loss: 0.61884
Epoch: 13, Step: 1480, Loss: 0.989189
```


Epoch: 13, Step: 1490, Loss: 6.87342
Epoch: 13, Step: 1500, Loss: 2.76681
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 13, Step: 1510, Loss: 0.687949
Epoch: 13, Step: 1520, Loss: 0.50976
Epoch: 13, Step: 1530, Loss: 0.427934
Epoch: 13, Step: 1540, Loss: 0.333088
Epoch: 13, Step: 1550, Loss: 0.323027
Epoch: 13, Step: 1560, Loss: 0.33801
Epoch: 13, Step: 1570, Loss: 0.327525
Epoch: 13, Step: 1580, Loss: 0.33337
Epoch: 13, Step: 1590, Loss: 0.321843
Epoch: 13, Step: 1600, Loss: 0.323382
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 13, Step: 1610, Loss: 0.342944
Epoch: 13, Step: 1620, Loss: 0.339918
Epoch: 13, Step: 1630, Loss: 0.329204
Epoch: 13, Step: 1640, Loss: 0.315489
Epoch: 13, Step: 1650, Loss: 0.317924
Epoch: 13, Step: 1660, Loss: 0.317328
Epoch: 13, Step: 1670, Loss: 0.316356
Epoch: 13, Step: 1680, Loss: 0.312059
Epoch: 13, Step: 1690, Loss: 0.312233
Epoch: 13, Step: 1700, Loss: 0.310127
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 13, Step: 1710, Loss: 0.317225
Epoch: 13, Step: 1720, Loss: 0.314049
Epoch: 13, Step: 1730, Loss: 0.312511

Epoch: 13, Step: 1740, Loss: 0.311636
Epoch: 13, Step: 1750, Loss: 0.323458
Model saved in file: ./save\model.ckpt
Epoch: 14, Step: 1400, Loss: 0.321349
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 14, Step: 1410, Loss: 0.320017
Epoch: 14, Step: 1420, Loss: 0.363784
Epoch: 14, Step: 1430, Loss: 0.514519
Epoch: 14, Step: 1440, Loss: 2.94636
Epoch: 14, Step: 1450, Loss: 3.3788
Epoch: 14, Step: 1460, Loss: 0.344397
Epoch: 14, Step: 1470, Loss: 0.368688
Epoch: 14, Step: 1480, Loss: 0.348446
Epoch: 14, Step: 1490, Loss: 0.35533
Epoch: 14, Step: 1500, Loss: 0.377118
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 14, Step: 1510, Loss: 0.40853
Epoch: 14, Step: 1520, Loss: 0.422545
Epoch: 14, Step: 1530, Loss: 0.305292
Epoch: 14, Step: 1540, Loss: 0.316542
Epoch: 14, Step: 1550, Loss: 0.323918
Epoch: 14, Step: 1560, Loss: 0.322759
Epoch: 14, Step: 1570, Loss: 0.311771
Epoch: 14, Step: 1580, Loss: 0.358944
Epoch: 14, Step: 1590, Loss: 0.361877
Epoch: 14, Step: 1600, Loss: 0.377236
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 14, Step: 1610, Loss: 0.413883

Epoch: 14, Step: 1620, Loss: 0.311589
Epoch: 14, Step: 1630, Loss: 0.322186
Epoch: 14, Step: 1640, Loss: 0.315648
Epoch: 14, Step: 1650, Loss: 0.313401
Epoch: 14, Step: 1660, Loss: 0.316074
Epoch: 14, Step: 1670, Loss: 0.314178
Epoch: 14, Step: 1680, Loss: 0.309716
Epoch: 14, Step: 1690, Loss: 0.309599
Epoch: 14, Step: 1700, Loss: 0.320401
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 14, Step: 1710, Loss: 0.315156
Epoch: 14, Step: 1720, Loss: 0.31403
Epoch: 14, Step: 1730, Loss: 0.291623
Epoch: 14, Step: 1740, Loss: 0.325654
Epoch: 14, Step: 1750, Loss: 0.377789
Epoch: 14, Step: 1760, Loss: 0.314073
Epoch: 14, Step: 1770, Loss: 0.81233
Epoch: 14, Step: 1780, Loss: 0.726798
Epoch: 14, Step: 1790, Loss: 0.420175
Epoch: 14, Step: 1800, Loss: 0.29634
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 14, Step: 1810, Loss: 0.294814
Epoch: 14, Step: 1820, Loss: 0.322568
Epoch: 14, Step: 1830, Loss: 0.40215
Epoch: 14, Step: 1840, Loss: 0.701343
Epoch: 14, Step: 1850, Loss: 0.570112
Model saved in file: ./save\model.ckpt
Epoch: 15, Step: 1500, Loss: 0.318577
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.

```
WARNING:tensorflow:*****
Epoch: 15, Step: 1510, Loss: 0.364998
Epoch: 15, Step: 1520, Loss: 0.514272
Epoch: 15, Step: 1530, Loss: 0.357984
Epoch: 15, Step: 1540, Loss: 0.355853
Epoch: 15, Step: 1550, Loss: 0.30475
Epoch: 15, Step: 1560, Loss: 0.422965
Epoch: 15, Step: 1570, Loss: 0.285126
Epoch: 15, Step: 1580, Loss: 0.372948
Epoch: 15, Step: 1590, Loss: 0.450025
Epoch: 15, Step: 1600, Loss: 0.492375
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 15, Step: 1610, Loss: 0.568224
Epoch: 15, Step: 1620, Loss: 0.356391
Epoch: 15, Step: 1630, Loss: 0.294987
Epoch: 15, Step: 1640, Loss: 0.283646
Epoch: 15, Step: 1650, Loss: 0.288562
Epoch: 15, Step: 1660, Loss: 0.289525
Epoch: 15, Step: 1670, Loss: 1.45769
Epoch: 15, Step: 1680, Loss: 4.48784
Epoch: 15, Step: 1690, Loss: 0.291122
Epoch: 15, Step: 1700, Loss: 0.282031
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 15, Step: 1710, Loss: 0.280179
Epoch: 15, Step: 1720, Loss: 0.285164
Epoch: 15, Step: 1730, Loss: 0.277376
Epoch: 15, Step: 1740, Loss: 0.276881
Epoch: 15, Step: 1750, Loss: 0.273258
Epoch: 15, Step: 1760, Loss: 0.272122
Epoch: 15, Step: 1770, Loss: 0.273998
Epoch: 15, Step: 1780, Loss: 0.280229
Epoch: 15, Step: 1790, Loss: 0.393422
Epoch: 15, Step: 1800, Loss: 0.339801
```

```
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 15, Step: 1810, Loss: 0.36787
Epoch: 15, Step: 1820, Loss: 0.306802
Epoch: 15, Step: 1830, Loss: 0.274335
Epoch: 15, Step: 1840, Loss: 0.286974
Epoch: 15, Step: 1850, Loss: 0.303418
Epoch: 15, Step: 1860, Loss: 0.521514
Epoch: 15, Step: 1870, Loss: 0.322113
Epoch: 15, Step: 1880, Loss: 0.749555
Epoch: 15, Step: 1890, Loss: 0.449949
Epoch: 15, Step: 1900, Loss: 0.779956
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 15, Step: 1910, Loss: 0.738593
Epoch: 15, Step: 1920, Loss: 0.3281
Epoch: 15, Step: 1930, Loss: 0.269137
Epoch: 15, Step: 1940, Loss: 0.265341
Epoch: 15, Step: 1950, Loss: 0.264287
Model saved in file: ./save\model.ckpt
Epoch: 16, Step: 1600, Loss: 0.264493
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 16, Step: 1610, Loss: 0.296097
Epoch: 16, Step: 1620, Loss: 0.307625
Epoch: 16, Step: 1630, Loss: 3.63245
Epoch: 16, Step: 1640, Loss: 2.26265
Epoch: 16, Step: 1650, Loss: 0.266153
Epoch: 16, Step: 1660, Loss: 0.264617
Epoch: 16, Step: 1670, Loss: 0.326012
Epoch: 16, Step: 1680, Loss: 0.334795
```

Epoch: 16, Step: 1690, Loss: 0.299277
Epoch: 16, Step: 1700, Loss: 0.321212
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 16, Step: 1710, Loss: 0.349581
Epoch: 16, Step: 1720, Loss: 0.261995
Epoch: 16, Step: 1730, Loss: 0.289911
Epoch: 16, Step: 1740, Loss: 0.27491
Epoch: 16, Step: 1750, Loss: 0.271589
Epoch: 16, Step: 1760, Loss: 0.262327
Epoch: 16, Step: 1770, Loss: 0.356944
Epoch: 16, Step: 1780, Loss: 0.287027
Epoch: 16, Step: 1790, Loss: 0.321958
Epoch: 16, Step: 1800, Loss: 0.301915
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 16, Step: 1810, Loss: 0.312358
Epoch: 16, Step: 1820, Loss: 0.303567
Epoch: 16, Step: 1830, Loss: 0.295435
Epoch: 16, Step: 1840, Loss: 0.334562
Epoch: 16, Step: 1850, Loss: 0.324346
Epoch: 16, Step: 1860, Loss: 0.326595
Epoch: 16, Step: 1870, Loss: 0.41947
Epoch: 16, Step: 1880, Loss: 0.658899
Epoch: 16, Step: 1890, Loss: 0.920156
Epoch: 16, Step: 1900, Loss: 0.691422
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 16, Step: 1910, Loss: 0.437599
Epoch: 16, Step: 1920, Loss: 1.00044
Epoch: 16, Step: 1930, Loss: 0.284804

Epoch: 16, Step: 1940, Loss: 0.336276
Epoch: 16, Step: 1950, Loss: 0.358487
Epoch: 16, Step: 1960, Loss: 0.773404
Epoch: 16, Step: 1970, Loss: 0.643972
Epoch: 16, Step: 1980, Loss: 0.363083
Epoch: 16, Step: 1990, Loss: 0.291611
Epoch: 16, Step: 2000, Loss: 0.266739
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 16, Step: 2010, Loss: 0.318677
Epoch: 16, Step: 2020, Loss: 0.69555
Epoch: 16, Step: 2030, Loss: 1.57896
Epoch: 16, Step: 2040, Loss: 0.753869
Epoch: 16, Step: 2050, Loss: 0.364346
Model saved in file: ./save\model.ckpt
Epoch: 17, Step: 1700, Loss: 0.265696
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 17, Step: 1710, Loss: 0.250667
Epoch: 17, Step: 1720, Loss: 0.246201
Epoch: 17, Step: 1730, Loss: 0.254657
Epoch: 17, Step: 1740, Loss: 0.273303
Epoch: 17, Step: 1750, Loss: 0.291879
Epoch: 17, Step: 1760, Loss: 0.246813
Epoch: 17, Step: 1770, Loss: 0.326239
Epoch: 17, Step: 1780, Loss: 0.451444
Epoch: 17, Step: 1790, Loss: 0.449954
Epoch: 17, Step: 1800, Loss: 0.591851
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 17, Step: 1810, Loss: 0.279092

Epoch: 17, Step: 1820, Loss: 0.253002
Epoch: 17, Step: 1830, Loss: 0.266421
Epoch: 17, Step: 1840, Loss: 0.338824
Epoch: 17, Step: 1850, Loss: 0.511052
Epoch: 17, Step: 1860, Loss: 3.11824
Epoch: 17, Step: 1870, Loss: 3.25351
Epoch: 17, Step: 1880, Loss: 0.279892
Epoch: 17, Step: 1890, Loss: 0.275545
Epoch: 17, Step: 1900, Loss: 0.551339
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 17, Step: 1910, Loss: 0.250791
Epoch: 17, Step: 1920, Loss: 0.26417
Epoch: 17, Step: 1930, Loss: 0.281823
Epoch: 17, Step: 1940, Loss: 0.243461
Epoch: 17, Step: 1950, Loss: 0.241687
Epoch: 17, Step: 1960, Loss: 0.247322
Epoch: 17, Step: 1970, Loss: 0.24553
Epoch: 17, Step: 1980, Loss: 0.257036
Epoch: 17, Step: 1990, Loss: 0.274275
Epoch: 17, Step: 2000, Loss: 0.282098
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 17, Step: 2010, Loss: 0.239978
Epoch: 17, Step: 2020, Loss: 0.238779
Epoch: 17, Step: 2030, Loss: 0.237625
Epoch: 17, Step: 2040, Loss: 0.239782
Epoch: 17, Step: 2050, Loss: 0.236863
Epoch: 17, Step: 2060, Loss: 0.236003
Epoch: 17, Step: 2070, Loss: 0.235572
Epoch: 17, Step: 2080, Loss: 0.23559
Epoch: 17, Step: 2090, Loss: 0.236249
Epoch: 17, Step: 2100, Loss: 0.234387
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.


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WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 17, Step: 2110, Loss: 0.234655
Epoch: 17, Step: 2120, Loss: 0.233657
Epoch: 17, Step: 2130, Loss: 0.232975
Epoch: 17, Step: 2140, Loss: 0.238719
Epoch: 17, Step: 2150, Loss: 0.242928
Model saved in file: ./save\model.ckpt
Epoch: 18, Step: 1800, Loss: 0.699389
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 18, Step: 1810, Loss: 0.458495
Epoch: 18, Step: 1820, Loss: 5.00344
Epoch: 18, Step: 1830, Loss: 0.691062
Epoch: 18, Step: 1840, Loss: 0.25037
Epoch: 18, Step: 1850, Loss: 0.244617
Epoch: 18, Step: 1860, Loss: 0.259763
Epoch: 18, Step: 1870, Loss: 0.279827
Epoch: 18, Step: 1880, Loss: 0.238619
Epoch: 18, Step: 1890, Loss: 0.311904
Epoch: 18, Step: 1900, Loss: 0.395851
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 18, Step: 1910, Loss: 1.06927
Epoch: 18, Step: 1920, Loss: 0.274256
Epoch: 18, Step: 1930, Loss: 0.257287
Epoch: 18, Step: 1940, Loss: 0.245684
Epoch: 18, Step: 1950, Loss: 0.256931
Epoch: 18, Step: 1960, Loss: 0.382381
Epoch: 18, Step: 1970, Loss: 0.261199
Epoch: 18, Step: 1980, Loss: 0.358347
Epoch: 18, Step: 1990, Loss: 0.295129
Epoch: 18, Step: 2000, Loss: 0.255703
```

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WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 18, Step: 2010, Loss: 0.236573
Epoch: 18, Step: 2020, Loss: 0.239657
Epoch: 18, Step: 2030, Loss: 0.235272
Epoch: 18, Step: 2040, Loss: 0.235264
Epoch: 18, Step: 2050, Loss: 0.235327
Epoch: 18, Step: 2060, Loss: 0.236169
Epoch: 18, Step: 2070, Loss: 0.234441
Epoch: 18, Step: 2080, Loss: 0.238462
Epoch: 18, Step: 2090, Loss: 0.246354
Epoch: 18, Step: 2100, Loss: 0.239594
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 18, Step: 2110, Loss: 0.238168
Epoch: 18, Step: 2120, Loss: 0.28666
Epoch: 18, Step: 2130, Loss: 0.259228
Epoch: 18, Step: 2140, Loss: 0.709745
Epoch: 18, Step: 2150, Loss: 0.49478
Epoch: 18, Step: 2160, Loss: 0.40887
Epoch: 18, Step: 2170, Loss: 0.263363
Epoch: 18, Step: 2180, Loss: 0.319305
Epoch: 18, Step: 2190, Loss: 0.238141
Epoch: 18, Step: 2200, Loss: 0.276785
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 18, Step: 2210, Loss: 0.378223
Epoch: 18, Step: 2220, Loss: 0.605724
Epoch: 18, Step: 2230, Loss: 0.361462
Epoch: 18, Step: 2240, Loss: 0.290383
Epoch: 18, Step: 2250, Loss: 0.244157
```

```
Model saved in file: ./save\model.ckpt
Epoch: 19, Step: 1900, Loss: 0.242112
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 19, Step: 1910, Loss: 0.268436
Epoch: 19, Step: 1920, Loss: 0.560602
Epoch: 19, Step: 1930, Loss: 0.272359
Epoch: 19, Step: 1940, Loss: 0.353059
Epoch: 19, Step: 1950, Loss: 0.630664
Epoch: 19, Step: 1960, Loss: 0.334164
Epoch: 19, Step: 1970, Loss: 0.602887
Epoch: 19, Step: 1980, Loss: 0.330436
Epoch: 19, Step: 1990, Loss: 0.401502
Epoch: 19, Step: 2000, Loss: 0.230962
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 19, Step: 2010, Loss: 0.229726
Epoch: 19, Step: 2020, Loss: 0.229885
Epoch: 19, Step: 2030, Loss: 0.230141
Epoch: 19, Step: 2040, Loss: 0.238161
Epoch: 19, Step: 2050, Loss: 4.15158
Epoch: 19, Step: 2060, Loss: 1.78209
Epoch: 19, Step: 2070, Loss: 0.234535
Epoch: 19, Step: 2080, Loss: 0.223372
Epoch: 19, Step: 2090, Loss: 0.22519
Epoch: 19, Step: 2100, Loss: 0.233726
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 19, Step: 2110, Loss: 0.223824
Epoch: 19, Step: 2120, Loss: 0.218305
Epoch: 19, Step: 2130, Loss: 0.216992
```

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Epoch: 19, Step: 2140, Loss: 0.216464
Epoch: 19, Step: 2150, Loss: 0.215741
Epoch: 19, Step: 2160, Loss: 0.215735
Epoch: 19, Step: 2170, Loss: 0.299689
Epoch: 19, Step: 2180, Loss: 0.273248
Epoch: 19, Step: 2190, Loss: 0.34459
Epoch: 19, Step: 2200, Loss: 0.250154
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 19, Step: 2210, Loss: 0.217019
Epoch: 19, Step: 2220, Loss: 0.221504
Epoch: 19, Step: 2230, Loss: 0.23223
Epoch: 19, Step: 2240, Loss: 0.219318
Epoch: 19, Step: 2250, Loss: 0.216096
Epoch: 19, Step: 2260, Loss: 0.263813
Epoch: 19, Step: 2270, Loss: 0.330385
Epoch: 19, Step: 2280, Loss: 1.77956
Epoch: 19, Step: 2290, Loss: 1.57296
Epoch: 19, Step: 2300, Loss: 1.16897
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 19, Step: 2310, Loss: 0.318737
Epoch: 19, Step: 2320, Loss: 0.312924
Epoch: 19, Step: 2330, Loss: 0.240226
Epoch: 19, Step: 2340, Loss: 0.226657
Epoch: 19, Step: 2350, Loss: 0.275183
Model saved in file: ./save\model.ckpt
Epoch: 20, Step: 2000, Loss: 0.28454
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 20, Step: 2010, Loss: 5.70682
```

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Epoch: 20, Step: 2020, Loss: 0.264523
Epoch: 20, Step: 2030, Loss: 0.213561
Epoch: 20, Step: 2040, Loss: 0.243415
Epoch: 20, Step: 2050, Loss: 0.288296
Epoch: 20, Step: 2060, Loss: 0.287648
Epoch: 20, Step: 2070, Loss: 0.219115
Epoch: 20, Step: 2080, Loss: 0.310652
Epoch: 20, Step: 2090, Loss: 0.259853
Epoch: 20, Step: 2100, Loss: 0.212332
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 20, Step: 2110, Loss: 0.249949
Epoch: 20, Step: 2120, Loss: 0.229112
Epoch: 20, Step: 2130, Loss: 0.218074
Epoch: 20, Step: 2140, Loss: 0.242504
Epoch: 20, Step: 2150, Loss: 0.362953
Epoch: 20, Step: 2160, Loss: 0.246393
Epoch: 20, Step: 2170, Loss: 0.304846
Epoch: 20, Step: 2180, Loss: 0.631423
Epoch: 20, Step: 2190, Loss: 0.299499
Epoch: 20, Step: 2200, Loss: 0.219836
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 20, Step: 2210, Loss: 0.213269
Epoch: 20, Step: 2220, Loss: 0.216512
Epoch: 20, Step: 2230, Loss: 0.246969
Epoch: 20, Step: 2240, Loss: 0.237119
Epoch: 20, Step: 2250, Loss: 0.230143
Epoch: 20, Step: 2260, Loss: 0.346174
Epoch: 20, Step: 2270, Loss: 0.354558
Epoch: 20, Step: 2280, Loss: 0.309555
Epoch: 20, Step: 2290, Loss: 0.37375
Epoch: 20, Step: 2300, Loss: 0.277756
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
```

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WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 20, Step: 2310, Loss: 0.258017
Epoch: 20, Step: 2320, Loss: 1.50281
Epoch: 20, Step: 2330, Loss: 0.597843
Epoch: 20, Step: 2340, Loss: 0.784105
Epoch: 20, Step: 2350, Loss: 0.400986
Epoch: 20, Step: 2360, Loss: 0.25397
Epoch: 20, Step: 2370, Loss: 0.229851
Epoch: 20, Step: 2380, Loss: 0.2222
Epoch: 20, Step: 2390, Loss: 0.31147
Epoch: 20, Step: 2400, Loss: 1.03685
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 20, Step: 2410, Loss: 1.51151
Epoch: 20, Step: 2420, Loss: 0.315631
Epoch: 20, Step: 2430, Loss: 0.319299
Epoch: 20, Step: 2440, Loss: 0.20568
Epoch: 20, Step: 2450, Loss: 0.208233
Model saved in file: ./save\model.ckpt
Epoch: 21, Step: 2100, Loss: 0.212892
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 21, Step: 2110, Loss: 0.21796
Epoch: 21, Step: 2120, Loss: 0.239897
Epoch: 21, Step: 2130, Loss: 0.234847
Epoch: 21, Step: 2140, Loss: 0.206448
Epoch: 21, Step: 2150, Loss: 0.329199
Epoch: 21, Step: 2160, Loss: 0.612443
Epoch: 21, Step: 2170, Loss: 0.314312
Epoch: 21, Step: 2180, Loss: 0.364565
Epoch: 21, Step: 2190, Loss: 0.215801
Epoch: 21, Step: 2200, Loss: 0.222291
```

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WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 21, Step: 2210, Loss: 0.218136
Epoch: 21, Step: 2220, Loss: 0.216518
Epoch: 21, Step: 2230, Loss: 0.233795
Epoch: 21, Step: 2240, Loss: 5.24314
Epoch: 21, Step: 2250, Loss: 0.570642
Epoch: 21, Step: 2260, Loss: 0.218804
Epoch: 21, Step: 2270, Loss: 0.216144
Epoch: 21, Step: 2280, Loss: 0.21966
Epoch: 21, Step: 2290, Loss: 0.226849
Epoch: 21, Step: 2300, Loss: 0.312997
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 21, Step: 2310, Loss: 0.411936
Epoch: 21, Step: 2320, Loss: 0.242998
Epoch: 21, Step: 2330, Loss: 0.32307
Epoch: 21, Step: 2340, Loss: 0.392581
Epoch: 21, Step: 2350, Loss: 0.254742
Epoch: 21, Step: 2360, Loss: 0.218459
Epoch: 21, Step: 2370, Loss: 0.233105
Epoch: 21, Step: 2380, Loss: 0.267508
Epoch: 21, Step: 2390, Loss: 0.203698
Epoch: 21, Step: 2400, Loss: 0.199239
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 21, Step: 2410, Loss: 0.202141
Epoch: 21, Step: 2420, Loss: 0.203891
Epoch: 21, Step: 2430, Loss: 0.200111
Epoch: 21, Step: 2440, Loss: 0.199912
Epoch: 21, Step: 2450, Loss: 0.198741
```

Epoch: 21, Step: 2460, Loss: 0.200162
Epoch: 21, Step: 2470, Loss: 0.201406
Epoch: 21, Step: 2480, Loss: 0.200536
Epoch: 21, Step: 2490, Loss: 0.199125
Epoch: 21, Step: 2500, Loss: 0.197253
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 21, Step: 2510, Loss: 0.197341
Epoch: 21, Step: 2520, Loss: 0.196144
Epoch: 21, Step: 2530, Loss: 0.199971
Epoch: 21, Step: 2540, Loss: 0.271937
Epoch: 21, Step: 2550, Loss: 1.03649
Model saved in file: ./save\model.ckpt
Epoch: 22, Step: 2200, Loss: 4.26474
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 22, Step: 2210, Loss: 0.273158
Epoch: 22, Step: 2220, Loss: 0.330147
Epoch: 22, Step: 2230, Loss: 0.228176
Epoch: 22, Step: 2240, Loss: 0.209973
Epoch: 22, Step: 2250, Loss: 0.227513
Epoch: 22, Step: 2260, Loss: 0.204332
Epoch: 22, Step: 2270, Loss: 0.259713
Epoch: 22, Step: 2280, Loss: 0.205018
Epoch: 22, Step: 2290, Loss: 0.198058
Epoch: 22, Step: 2300, Loss: 0.220283
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 22, Step: 2310, Loss: 0.206286
Epoch: 22, Step: 2320, Loss: 0.204817
Epoch: 22, Step: 2330, Loss: 0.325206

Epoch: 22, Step: 2340, Loss: 0.834267
Epoch: 22, Step: 2350, Loss: 0.293637
Epoch: 22, Step: 2360, Loss: 0.335319
Epoch: 22, Step: 2370, Loss: 0.237179
Epoch: 22, Step: 2380, Loss: 0.21125
Epoch: 22, Step: 2390, Loss: 0.201189
Epoch: 22, Step: 2400, Loss: 0.203705
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 22, Step: 2410, Loss: 0.214581
Epoch: 22, Step: 2420, Loss: 0.214655
Epoch: 22, Step: 2430, Loss: 0.210845
Epoch: 22, Step: 2440, Loss: 0.214663
Epoch: 22, Step: 2450, Loss: 0.225871
Epoch: 22, Step: 2460, Loss: 0.222432
Epoch: 22, Step: 2470, Loss: 0.233981
Epoch: 22, Step: 2480, Loss: 0.196474
Epoch: 22, Step: 2490, Loss: 0.225856
Epoch: 22, Step: 2500, Loss: 0.293054
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 22, Step: 2510, Loss: 0.207142
Epoch: 22, Step: 2520, Loss: 0.650278
Epoch: 22, Step: 2530, Loss: 0.791182
Epoch: 22, Step: 2540, Loss: 0.39319
Epoch: 22, Step: 2550, Loss: 0.230111
Epoch: 22, Step: 2560, Loss: 0.223699
Epoch: 22, Step: 2570, Loss: 0.205029
Epoch: 22, Step: 2580, Loss: 0.310243
Epoch: 22, Step: 2590, Loss: 1.0458
Epoch: 22, Step: 2600, Loss: 0.952581
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`

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WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 22, Step: 2610, Loss: 0.2469
Epoch: 22, Step: 2620, Loss: 0.233515
Epoch: 22, Step: 2630, Loss: 0.210042
Epoch: 22, Step: 2640, Loss: 0.322727
Epoch: 22, Step: 2650, Loss: 0.318139
Model saved in file: ./save\model.ckpt
Epoch: 23, Step: 2300, Loss: 0.227262
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 23, Step: 2310, Loss: 0.306922
Epoch: 23, Step: 2320, Loss: 0.448123
Epoch: 23, Step: 2330, Loss: 0.419823
Epoch: 23, Step: 2340, Loss: 0.421732
Epoch: 23, Step: 2350, Loss: 0.487362
Epoch: 23, Step: 2360, Loss: 0.397428
Epoch: 23, Step: 2370, Loss: 0.22501
Epoch: 23, Step: 2380, Loss: 0.198275
Epoch: 23, Step: 2390, Loss: 0.200536
Epoch: 23, Step: 2400, Loss: 0.195695
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 23, Step: 2410, Loss: 0.20761
Epoch: 23, Step: 2420, Loss: 0.384273
Epoch: 23, Step: 2430, Loss: 5.2578
Epoch: 23, Step: 2440, Loss: 0.271087
Epoch: 23, Step: 2450, Loss: 0.200186
Epoch: 23, Step: 2460, Loss: 0.198508
Epoch: 23, Step: 2470, Loss: 0.206747
Epoch: 23, Step: 2480, Loss: 0.20289
Epoch: 23, Step: 2490, Loss: 0.195779
Epoch: 23, Step: 2500, Loss: 0.187988
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
```

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WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 23, Step: 2510, Loss: 0.187916
Epoch: 23, Step: 2520, Loss: 0.18819
Epoch: 23, Step: 2530, Loss: 0.187533
Epoch: 23, Step: 2540, Loss: 0.187916
Epoch: 23, Step: 2550, Loss: 0.216318
Epoch: 23, Step: 2560, Loss: 0.233417
Epoch: 23, Step: 2570, Loss: 0.207165
Epoch: 23, Step: 2580, Loss: 0.190244
Epoch: 23, Step: 2590, Loss: 0.187206
Epoch: 23, Step: 2600, Loss: 0.186017
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 23, Step: 2610, Loss: 0.187813
Epoch: 23, Step: 2620, Loss: 0.206466
Epoch: 23, Step: 2630, Loss: 0.190236
Epoch: 23, Step: 2640, Loss: 0.188494
Epoch: 23, Step: 2650, Loss: 0.202076
Epoch: 23, Step: 2660, Loss: 0.220448
Epoch: 23, Step: 2670, Loss: 0.234966
Epoch: 23, Step: 2680, Loss: 0.399401
Epoch: 23, Step: 2690, Loss: 0.350287
Epoch: 23, Step: 2700, Loss: 0.29363
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 23, Step: 2710, Loss: 0.234452
Epoch: 23, Step: 2720, Loss: 0.21652
Epoch: 23, Step: 2730, Loss: 0.31224
Epoch: 23, Step: 2740, Loss: 2.43225
Epoch: 23, Step: 2750, Loss: 4.03689
Model saved in file: ./save\model.ckpt
Epoch: 24, Step: 2400, Loss: 0.251309
```

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WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 24, Step: 2410, Loss: 0.18827
Epoch: 24, Step: 2420, Loss: 0.238871
Epoch: 24, Step: 2430, Loss: 0.266242
Epoch: 24, Step: 2440, Loss: 0.246036
Epoch: 24, Step: 2450, Loss: 0.216518
Epoch: 24, Step: 2460, Loss: 0.297073
Epoch: 24, Step: 2470, Loss: 0.18978
Epoch: 24, Step: 2480, Loss: 0.199392
Epoch: 24, Step: 2490, Loss: 0.209688
Epoch: 24, Step: 2500, Loss: 0.201837
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 24, Step: 2510, Loss: 0.193469
Epoch: 24, Step: 2520, Loss: 0.262524
Epoch: 24, Step: 2530, Loss: 0.282665
Epoch: 24, Step: 2540, Loss: 0.260295
Epoch: 24, Step: 2550, Loss: 0.305682
Epoch: 24, Step: 2560, Loss: 0.198566
Epoch: 24, Step: 2570, Loss: 0.212936
Epoch: 24, Step: 2580, Loss: 0.189333
Epoch: 24, Step: 2590, Loss: 0.208923
Epoch: 24, Step: 2600, Loss: 0.259562
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 24, Step: 2610, Loss: 0.284934
Epoch: 24, Step: 2620, Loss: 0.253142
Epoch: 24, Step: 2630, Loss: 0.213819
Epoch: 24, Step: 2640, Loss: 0.250288
Epoch: 24, Step: 2650, Loss: 0.205294
```

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Epoch: 24, Step: 2660, Loss: 0.18372
Epoch: 24, Step: 2670, Loss: 0.213046
Epoch: 24, Step: 2680, Loss: 0.189444
Epoch: 24, Step: 2690, Loss: 0.422492
Epoch: 24, Step: 2700, Loss: 1.1434
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 24, Step: 2710, Loss: 0.436901
Epoch: 24, Step: 2720, Loss: 0.746381
Epoch: 24, Step: 2730, Loss: 0.337233
Epoch: 24, Step: 2740, Loss: 0.259222
Epoch: 24, Step: 2750, Loss: 0.217782
Epoch: 24, Step: 2760, Loss: 0.223778
Epoch: 24, Step: 2770, Loss: 0.362971
Epoch: 24, Step: 2780, Loss: 0.86042
Epoch: 24, Step: 2790, Loss: 0.70474
Epoch: 24, Step: 2800, Loss: 0.23939
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 24, Step: 2810, Loss: 0.22498
Epoch: 24, Step: 2820, Loss: 0.183787
Epoch: 24, Step: 2830, Loss: 0.181498
Epoch: 24, Step: 2840, Loss: 0.188966
Epoch: 24, Step: 2850, Loss: 0.193001
Model saved in file: ./save\model.ckpt
Epoch: 25, Step: 2500, Loss: 0.227201
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 25, Step: 2510, Loss: 0.181655
Epoch: 25, Step: 2520, Loss: 0.216949
Epoch: 25, Step: 2530, Loss: 0.324845
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Epoch: 25, Step: 2540, Loss: 0.566706
Epoch: 25, Step: 2550, Loss: 0.415265
Epoch: 25, Step: 2560, Loss: 0.199388
Epoch: 25, Step: 2570, Loss: 0.192191
Epoch: 25, Step: 2580, Loss: 0.19608
Epoch: 25, Step: 2590, Loss: 0.208825
Epoch: 25, Step: 2600, Loss: 0.223087
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 25, Step: 2610, Loss: 1.72464
Epoch: 25, Step: 2620, Loss: 6.7214
Epoch: 25, Step: 2630, Loss: 0.236041
Epoch: 25, Step: 2640, Loss: 0.216362
Epoch: 25, Step: 2650, Loss: 0.240661
Epoch: 25, Step: 2660, Loss: 0.187113
Epoch: 25, Step: 2670, Loss: 0.200256
Epoch: 25, Step: 2680, Loss: 0.38499
Epoch: 25, Step: 2690, Loss: 0.584266
Epoch: 25, Step: 2700, Loss: 0.726679
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 25, Step: 2710, Loss: 0.5837
Epoch: 25, Step: 2720, Loss: 0.606529
Epoch: 25, Step: 2730, Loss: 1.76434
Epoch: 25, Step: 2740, Loss: 0.223967
Epoch: 25, Step: 2750, Loss: 0.241616
Epoch: 25, Step: 2760, Loss: 0.436151
Epoch: 25, Step: 2770, Loss: 0.25061
Epoch: 25, Step: 2780, Loss: 0.576046
Epoch: 25, Step: 2790, Loss: 0.180853
Epoch: 25, Step: 2800, Loss: 0.177037
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`

```
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 25, Step: 2810, Loss: 0.176682
Epoch: 25, Step: 2820, Loss: 0.176015
Epoch: 25, Step: 2830, Loss: 0.175464
Epoch: 25, Step: 2840, Loss: 0.176232
Epoch: 25, Step: 2850, Loss: 0.176468
Epoch: 25, Step: 2860, Loss: 0.176627
Epoch: 25, Step: 2870, Loss: 0.176316
Epoch: 25, Step: 2880, Loss: 0.175113
Epoch: 25, Step: 2890, Loss: 0.173797
Epoch: 25, Step: 2900, Loss: 0.175079
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 25, Step: 2910, Loss: 0.193253
Epoch: 25, Step: 2920, Loss: 0.217817
Epoch: 25, Step: 2930, Loss: 3.2901
Epoch: 25, Step: 2940, Loss: 2.42168
Epoch: 25, Step: 2950, Loss: 0.323821
Model saved in file: ./save\model.ckpt
Epoch: 26, Step: 2600, Loss: 0.183184
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 26, Step: 2610, Loss: 0.241227
Epoch: 26, Step: 2620, Loss: 0.202059
Epoch: 26, Step: 2630, Loss: 0.201617
Epoch: 26, Step: 2640, Loss: 0.237717
Epoch: 26, Step: 2650, Loss: 0.259843
Epoch: 26, Step: 2660, Loss: 0.176088
Epoch: 26, Step: 2670, Loss: 0.188478
Epoch: 26, Step: 2680, Loss: 0.18735
Epoch: 26, Step: 2690, Loss: 0.183064
Epoch: 26, Step: 2700, Loss: 0.268638
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
```

```
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 26, Step: 2710, Loss: 2.00839
Epoch: 26, Step: 2720, Loss: 0.488086
Epoch: 26, Step: 2730, Loss: 0.306343
Epoch: 26, Step: 2740, Loss: 1.03165
Epoch: 26, Step: 2750, Loss: 0.34881
Epoch: 26, Step: 2760, Loss: 0.807746
Epoch: 26, Step: 2770, Loss: 0.424547
Epoch: 26, Step: 2780, Loss: 0.542135
Epoch: 26, Step: 2790, Loss: 0.391825
Epoch: 26, Step: 2800, Loss: 0.180804
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 26, Step: 2810, Loss: 0.191209
Epoch: 26, Step: 2820, Loss: 0.191395
Epoch: 26, Step: 2830, Loss: 0.19405
Epoch: 26, Step: 2840, Loss: 0.197733
Epoch: 26, Step: 2850, Loss: 0.198291
Epoch: 26, Step: 2860, Loss: 0.182815
Epoch: 26, Step: 2870, Loss: 0.236594
Epoch: 26, Step: 2880, Loss: 0.254023
Epoch: 26, Step: 2890, Loss: 0.261872
Epoch: 26, Step: 2900, Loss: 0.777216
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 26, Step: 2910, Loss: 0.600777
Epoch: 26, Step: 2920, Loss: 0.287784
Epoch: 26, Step: 2930, Loss: 0.189362
Epoch: 26, Step: 2940, Loss: 0.17855
Epoch: 26, Step: 2950, Loss: 0.223126
Epoch: 26, Step: 2960, Loss: 0.343598
Epoch: 26, Step: 2970, Loss: 0.571236
```


Epoch: 26, Step: 2980, Loss: 0.377421
Epoch: 26, Step: 2990, Loss: 0.243882
Epoch: 26, Step: 3000, Loss: 0.184879
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 26, Step: 3010, Loss: 0.184268
Epoch: 26, Step: 3020, Loss: 0.177856
Epoch: 26, Step: 3030, Loss: 0.206806
Epoch: 26, Step: 3040, Loss: 0.215795
Epoch: 26, Step: 3050, Loss: 0.221291
Model saved in file: ./save\model.ckpt
Epoch: 27, Step: 2700, Loss: 0.18305
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 27, Step: 2710, Loss: 0.429753
Epoch: 27, Step: 2720, Loss: 1.50554
Epoch: 27, Step: 2730, Loss: 0.883757
Epoch: 27, Step: 2740, Loss: 0.426721
Epoch: 27, Step: 2750, Loss: 0.193725
Epoch: 27, Step: 2760, Loss: 0.182999
Epoch: 27, Step: 2770, Loss: 0.190958
Epoch: 27, Step: 2780, Loss: 0.18117
Epoch: 27, Step: 2790, Loss: 0.190316
Epoch: 27, Step: 2800, Loss: 4.04849
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 27, Step: 2810, Loss: 4.08511
Epoch: 27, Step: 2820, Loss: 0.18526
Epoch: 27, Step: 2830, Loss: 0.178111
Epoch: 27, Step: 2840, Loss: 0.17477
Epoch: 27, Step: 2850, Loss: 0.184976

Epoch: 27, Step: 2860, Loss: 0.172963
Epoch: 27, Step: 2870, Loss: 0.175296
Epoch: 27, Step: 2880, Loss: 0.172496
Epoch: 27, Step: 2890, Loss: 0.170871
Epoch: 27, Step: 2900, Loss: 0.169605
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 27, Step: 2910, Loss: 0.168737
Epoch: 27, Step: 2920, Loss: 0.176353
Epoch: 27, Step: 2930, Loss: 0.211896
Epoch: 27, Step: 2940, Loss: 0.205812
Epoch: 27, Step: 2950, Loss: 0.178368
Epoch: 27, Step: 2960, Loss: 0.171895
Epoch: 27, Step: 2970, Loss: 0.174829
Epoch: 27, Step: 2980, Loss: 0.235086
Epoch: 27, Step: 2990, Loss: 0.178736
Epoch: 27, Step: 3000, Loss: 0.171451
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 27, Step: 3010, Loss: 0.180874
Epoch: 27, Step: 3020, Loss: 0.168932
Epoch: 27, Step: 3030, Loss: 0.179672
Epoch: 27, Step: 3040, Loss: 0.180286
Epoch: 27, Step: 3050, Loss: 0.177112
Epoch: 27, Step: 3060, Loss: 0.175373
Epoch: 27, Step: 3070, Loss: 0.234636
Epoch: 27, Step: 3080, Loss: 1.33159
Epoch: 27, Step: 3090, Loss: 0.345618
Epoch: 27, Step: 3100, Loss: 1.30352
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****

Epoch: 27, Step: 3110, Loss: 1.00511
Epoch: 27, Step: 3120, Loss: 4.81575
Epoch: 27, Step: 3130, Loss: 1.37808
Epoch: 27, Step: 3140, Loss: 0.23861
Epoch: 27, Step: 3150, Loss: 1.15553
Model saved in file: ./save\model.ckpt
Epoch: 28, Step: 2800, Loss: 3.05372
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 28, Step: 2810, Loss: 0.210982
Epoch: 28, Step: 2820, Loss: 0.183687
Epoch: 28, Step: 2830, Loss: 0.249564
Epoch: 28, Step: 2840, Loss: 0.24281
Epoch: 28, Step: 2850, Loss: 0.175846
Epoch: 28, Step: 2860, Loss: 0.196105
Epoch: 28, Step: 2870, Loss: 0.203438
Epoch: 28, Step: 2880, Loss: 0.185542
Epoch: 28, Step: 2890, Loss: 0.173933
Epoch: 28, Step: 2900, Loss: 0.316191
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 28, Step: 2910, Loss: 0.217077
Epoch: 28, Step: 2920, Loss: 0.279628
Epoch: 28, Step: 2930, Loss: 0.224437
Epoch: 28, Step: 2940, Loss: 0.204167
Epoch: 28, Step: 2950, Loss: 0.184296
Epoch: 28, Step: 2960, Loss: 0.183031
Epoch: 28, Step: 2970, Loss: 0.191303
Epoch: 28, Step: 2980, Loss: 0.283318
Epoch: 28, Step: 2990, Loss: 0.178684
Epoch: 28, Step: 3000, Loss: 0.170444
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`

```
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 28, Step: 3010, Loss: 0.170881
Epoch: 28, Step: 3020, Loss: 0.178497
Epoch: 28, Step: 3030, Loss: 0.171007
Epoch: 28, Step: 3040, Loss: 0.180931
Epoch: 28, Step: 3050, Loss: 0.19402
Epoch: 28, Step: 3060, Loss: 0.189548
Epoch: 28, Step: 3070, Loss: 0.243784
Epoch: 28, Step: 3080, Loss: 0.624169
Epoch: 28, Step: 3090, Loss: 0.793791
Epoch: 28, Step: 3100, Loss: 0.39505
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 28, Step: 3110, Loss: 0.676304
Epoch: 28, Step: 3120, Loss: 1.59291
Epoch: 28, Step: 3130, Loss: 0.1892
Epoch: 28, Step: 3140, Loss: 0.245493
Epoch: 28, Step: 3150, Loss: 0.453962
Epoch: 28, Step: 3160, Loss: 0.733494
Epoch: 28, Step: 3170, Loss: 0.402052
Epoch: 28, Step: 3180, Loss: 0.220516
Epoch: 28, Step: 3190, Loss: 0.168597
Epoch: 28, Step: 3200, Loss: 0.171722
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow: `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 28, Step: 3210, Loss: 0.168729
Epoch: 28, Step: 3220, Loss: 0.176007
Epoch: 28, Step: 3230, Loss: 0.184357
Epoch: 28, Step: 3240, Loss: 0.204659
Epoch: 28, Step: 3250, Loss: 0.170298
Model saved in file: ./save\model.ckpt
Epoch: 29, Step: 2900, Loss: 0.283755
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
```

```
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 29, Step: 2910, Loss: 0.520546
Epoch: 29, Step: 2920, Loss: 0.306679
Epoch: 29, Step: 2930, Loss: 0.412288
Epoch: 29, Step: 2940, Loss: 0.18727
Epoch: 29, Step: 2950, Loss: 0.185521
Epoch: 29, Step: 2960, Loss: 0.185459
Epoch: 29, Step: 2970, Loss: 0.185956
Epoch: 29, Step: 2980, Loss: 0.206357
Epoch: 29, Step: 2990, Loss: 5.85604
Epoch: 29, Step: 3000, Loss: 1.77781
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 29, Step: 3010, Loss: 0.319294
Epoch: 29, Step: 3020, Loss: 0.198242
Epoch: 29, Step: 3030, Loss: 0.203659
Epoch: 29, Step: 3040, Loss: 0.187137
Epoch: 29, Step: 3050, Loss: 0.177308
Epoch: 29, Step: 3060, Loss: 0.182232
Epoch: 29, Step: 3070, Loss: 0.181612
Epoch: 29, Step: 3080, Loss: 0.186926
Epoch: 29, Step: 3090, Loss: 0.195353
Epoch: 29, Step: 3100, Loss: 0.208327
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 29, Step: 3110, Loss: 1.78303
Epoch: 29, Step: 3120, Loss: 0.182224
Epoch: 29, Step: 3130, Loss: 0.204672
Epoch: 29, Step: 3140, Loss: 0.241802
Epoch: 29, Step: 3150, Loss: 0.163779
Epoch: 29, Step: 3160, Loss: 0.536321
Epoch: 29, Step: 3170, Loss: 0.996884
```

```

Epoch: 29, Step: 3180, Loss: 0.293759
Epoch: 29, Step: 3190, Loss: 0.16379
Epoch: 29, Step: 3200, Loss: 0.162044
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 29, Step: 3210, Loss: 0.163918
Epoch: 29, Step: 3220, Loss: 0.169875
Epoch: 29, Step: 3230, Loss: 0.167839
Epoch: 29, Step: 3240, Loss: 0.16332
Epoch: 29, Step: 3250, Loss: 0.162769
Epoch: 29, Step: 3260, Loss: 0.162923
Epoch: 29, Step: 3270, Loss: 0.163154
Epoch: 29, Step: 3280, Loss: 0.162953
Epoch: 29, Step: 3290, Loss: 0.207169
Epoch: 29, Step: 3300, Loss: 0.198097
WARNING:tensorflow:*****
WARNING:tensorflow:TensorFlow's V1 checkpoint format has been deprecated.
WARNING:tensorflow:Consider switching to the more efficient V2 format:
WARNING:tensorflow:  `tf.train.Saver(write_version=tf.train.SaverDef.V2)`
WARNING:tensorflow:now on by default.
WARNING:tensorflow:*****
Epoch: 29, Step: 3310, Loss: 5.20802
Epoch: 29, Step: 3320, Loss: 0.25982
Epoch: 29, Step: 3330, Loss: 0.162529
Epoch: 29, Step: 3340, Loss: 0.187289
Epoch: 29, Step: 3350, Loss: 0.241642
Model saved in file: ./save\model.ckpt
Run the command line:
--> tensorboard --logdir=./logs
Then open http://0.0.0.0:6006/ into your web browser

```

5. Visualising the Results

```

In [21]: #Run this file in the command prompt
sess = tf.InteractiveSession()
saver = tf.train.Saver()
saver.restore(sess, "save/model.ckpt")

img = cv2.imread('steering_wheel_image.jpg',0)
rows,cols = img.shape

smoothed_angle = 0

cap = cv2.VideoCapture(0)
while(cv2.waitKey(10) != ord('q')):
    ret, frame = cap.read()
    image = scipy.misc.imresize(frame, [66, 200]) / 255.0
    degrees = model.y.eval(feed_dict={model.x: [image], model.keep_prob: 1.0})[0][0] * 180 / scipy.pi
    call("clear")
    print("Predicted steering angle: " + str(degrees) + " degrees")
    cv2.imshow('frame', frame)
    #make smooth angle transitions by turning the steering wheel based on the difference of the current angle
    #and the predicted angle
    smoothed_angle += 0.2 * pow(abs((degrees - smoothed_angle)), 2.0 / 3.0) * (degrees - smoothed_angle) / abs(degrees - smoothed_angle)
    M = cv2.getRotationMatrix2D((cols/2,rows/2),-smoothed_angle,1)
    dst = cv2.warpAffine(img,M,(cols,rows))
    cv2.imshow("steering wheel", dst)

cap.release()
cv2.destroyAllWindows()

```

Conclusion:

I have split the data into train(70%) and test(30%), used learning rate of 10^{-4} and took keep probability value as 0.5 . Now I am able to see different steering angles.