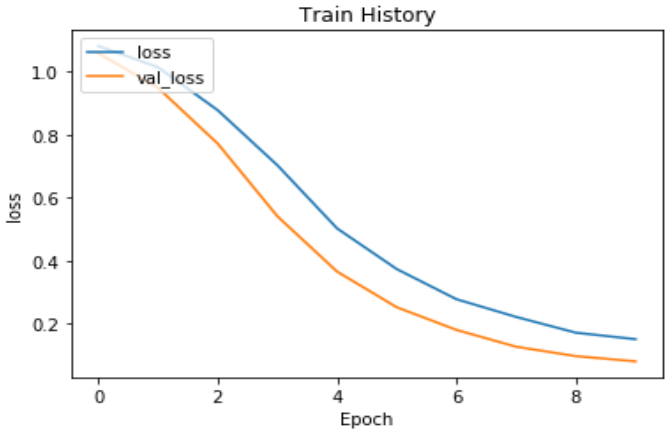
《Using Neural Network to predict Iris Data》

```
   sepal_length  sepal_width  petal_length  petal_width     species
0           5.1          3.5           1.4          0.2      setosa
1           4.9          3.0           1.4          0.2      setosa
2           4.7          3.2           1.3          0.2      setosa
3           4.6          3.1           1.5          0.2      setosa
4           5.0          3.6           1.4          0.2      setosa
Using TensorFlow backend.
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
dense_1 (Dense)              (None, 1000)              5000
_________________________________________________________________
dense_2 (Dense)              (None, 500)               500500
_________________________________________________________________
dense_3 (Dense)              (None, 300)               150300
_________________________________________________________________
dropout_1 (Dropout)          (None, 300)               0
_________________________________________________________________
dense_4 (Dense)              (None, 3)                 903
=================================================================
Total params: 656,703
Trainable params: 656,703
Non-trainable params: 0
_________________________________________________________________
Train on 120 samples, validate on 30 samples
Epoch 1/10
120/120 [==============================] - 0s 4ms/step - loss: 1.0811 - acc: 0.3500 -
val_loss: 1.0584 - val_acc: 0.2667
Epoch 2/10
120/120 [==============================] - 0s 706us/step - loss: 1.0138 - acc: 0.4417 -
val_loss: 0.9482 - val_acc: 0.7667
Epoch 3/10
120/120 [==============================] - 0s 705us/step - loss: 0.8772 - acc: 0.6583 -
val_loss: 0.7711 - val_acc: 0.7333

...

Epoch 8/10
120/120 [==============================] - 0s 966us/step - loss: 0.2208 - acc: 0.9500 -
val_loss: 0.1261 - val_acc: 1.0000
Epoch 9/10
120/120 [==============================] - 0s 705us/step - loss: 0.1707 - acc: 0.9417 -
val_loss: 0.0963 - val_acc: 1.0000
Epoch 10/10
120/120 [==============================] - 0s 651us/step - loss: 0.1501 - acc: 0.9500 -
val_loss: 0.0797 - val_acc: 1.0000
Accuracy of the dataset 100.0
```



From the figure on the left side, the more the number of epoch, the less the loss costs.