02:00:00

Start Lab

# Machine Learning in TensorFlow using the Estimator API

Rate Lab

Overview

### Objectives

2 hours

Free

class and evaluate its performance.

In this lab, you will learn about the following:

In this lab, you will create a machine learning model using the TensorFlow Estimator

## · Building and evaluating a linear regression model using Estimators.

Using the Estimator API to read data from a Pandas DataFrame.

Setup

## 2. Note the lab's access time (for example, 02:00:00 and make sure you can

Username

cost.

finish in that time block.

For each lab, you get a new GCP project and set of resources for a fixed time at no

There is no pause feature. You can restart if needed, but you have to start at the beginning.

1. Make sure you signed into Qwiklabs using an incognito window.

3. When ready, click START LAB

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Console

google2876526\_student@qwiklabs.n

4. Note your lab credentials. You will use them to sign in to Cloud Platform Console.

Password TG959yrKDX **GCP Project ID** qwiklabs-gcp-0855e773352d3560 New to labs? View our introductory video! Click Open Google Console. 6. Click Use another account and copy/paste credentials for this lab into the prompts. If you use other credentials, you'll get errors or incur charges. 7. Accept the terms and skip the recovery resource page. Do not click End Lab unless you are finished with the lab or want to restart it.

### Notebooks Tables Jobs

Tensorflow Enterprise 1.15 > Without GPUs:

C REFRESH

This clears your work and removes the project.

**Launch Al Platform Notebooks** 

Click on the Navigation Menu. Navigate to Al Platform, then to Notebooks.

Dashboard

Al Hub

Models

To launch Al Platform Notebooks:

ARTIFICIAL INTELLIGENCE

**Data Labeling** 

Al Platform

Natural Language

**Talent Solution** 

Translation

Vision

+ NEW INSTANCE

Customize instance

R 3.6 and key libraries pre-installed

Step 2

ed.

R 3.6

Pytorch 1.2

different.

PyTorch 1.2 pre-installed

New notebook instance

Networking:

Subnetwork \*

Permission:

default(10.138.0.0/20)

External IP: Ephemeral(Automatic)

Step 1

On the Notebook instances page, click + NEW INSTANCE . Select a 1.XX version of TensorFlow (not a 2.0) without GPUs. In the following example, you would select

▶ START

■ STOP

C) RESET

DELETE

0

Python 2 and 3 with Pandas, SciKit Learn and other key packages pre-installed TensorFlow Enterprise 1.15 Without GPUs TensorFlow Enterprise 1.15 pre-installed with support for Keras With 1 NVIDIA Tesla K80 TensorFlow 2.0 TensorFlow 2.0 pre-installed with support for Keras

Tensorflow 1.XX versions change semi-frequently, so the version you pick may be

In the pop-up, confirm the name of the deep learning VM and click Create.

Instance name \* tensorflow-20191107-145738 **Environment:** Image: TensorFlow Enterprise 1.15 Packages: python2, python3, scikit-learn, pandas, and nltk. Machine configurations: ② Region and zone: us-west1-b Machine type: 4 vCPUs, 15 GB RAM Boot disk: 100 GB Disk

Compute Engine default service account \$99.89 monthly, \$0.137 hourly CANCEL CUSTOMIZE CREATE The new VM will take 2-3 minutes to start. Click Open JupyterLab. A JupyterLab window will open in a new tab. File Edit View Run Kernel Git Tabs Settings Help **Last Modified** Notebook 3 hours ago Python 3 >\_ Console Python 2 Python 3 \$\_

Text File

Tensorboard

Clone course repo within your Al Platform **Notebooks instance** To clone the training-data-analyst notebook in your JupyterLab instance: Step 1 In JupyterLab, click the Terminal icon to open a new terminal. Launcher Notebook Python 3 Python 2

Console

Python 3

Terminal

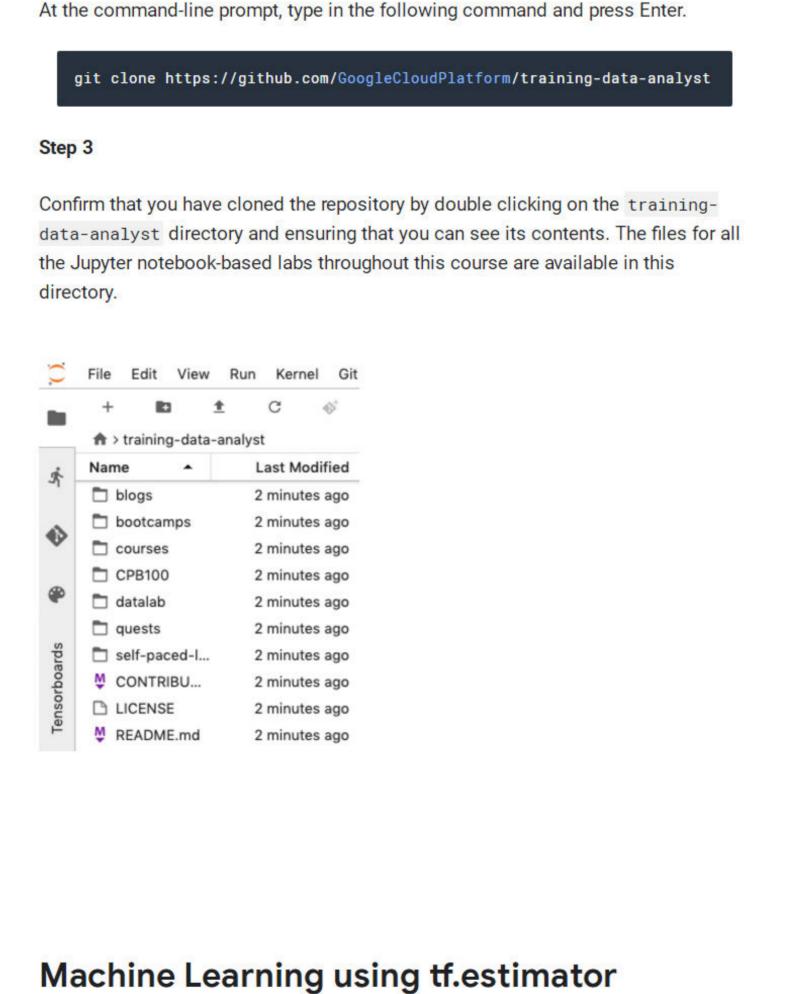
Other

Step 2

Python 2

Text File

Tensorboard



# Step 1

Step 2

Step 3 Compare to solution In the parent level 03\_tensorflow folder (above labs/) there is the solution notebook

In the notebook interface, navigate to training-data-analyst > courses >

drop-down menu, select Clear All Outputs).

with the same title for comparison.

machine\_learning > deepdive > 03\_tensorflow > labs and open b\_estimator.ipynb.

In the notebook interface, click on Edit > Clear All Outputs (click on Edit, then in the

End your lab When you have completed your lab, click End Lab. Qwiklabs removes the resources you've used and cleans the account for you.

1 star = Very dissatisfied

2 stars = Dissatisfied

3 stars = Neutral

4 stars = Satisfied

You will be given an opportunity to rate the lab experience. Select the applicable number of stars, type a comment, and then click Submit. The number of stars indicates the following:

 5 stars = Very satisfied You can close the dialog box if you don't want to provide feedback.

For feedback, suggestions, or corrections, please use the Support tab.

Last Tested Date: 11-25-2019 Last Updated Date: 11-25-2019

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**O** 在线交谈

Launch Al Platform Notebooks Clone course repo within your Al Platform Notebooks instance Machine Learning using tf.estimator End your lab

Overview

Setup

