Start Lab 02:00:00

Improve Model Accuracy by Hyperparameter Tuning with AI Platform

Overview
Setup
Create Storage Bucket
Deployment Manager
Launch AI Platform Notebooks
Enable APIs
Hyperparameter Tuning
End your lab

2 hours Free ★★★★☆ Rate Lab

Overview

Duration is 1 min

This lab is part of a lab series, where you go from exploring a taxicab dataset to training and deploying a high-accuracy distributed model with Cloud AI Platform.

What you learn

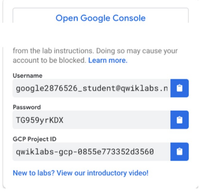
In this lab, you will improve accuracy of a model by hyperparameter tuning with Cloud AI Platform.

Setup

For each lab, you get a new Google Cloud project and set of resources for a fixed time at no cost.

1. Make sure you signed into Qwiklabs using an **incognito window**.
2. Note the lab's access time (for example, 02:00:00) and make sure you can finish in that time block.

   There is no pause feature. You can restart if needed, but you have to start at the beginning.
3. When ready, click START LAB.
4. Note your lab credentials. You will use them to sign in to the Google Cloud Console.



5. 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**.

Do not click **End Lab** unless you are finished with the lab or want to restart it. This clears your work and removes the project.

Create Storage Bucket

Duration is 2 min

Create a bucket using the GCP console:

Step 1

In your GCP Console, click on the **Navigation menu** ( ), and select **Storage**.

Click on **Create bucket**.

Step 3

Choose a Regional bucket and set a unique name (use your project ID because it is unique). Then, click **Create**.

Deployment Manager

This lab is using a deployment manager script to create the Cloud AI Platform instance you will need for this exercise.

The notebook instance will contain the github repository you need to complete this assignment. It should take 2 - 3 minutes for the instance to be ready.

Launch AI Platform Notebooks

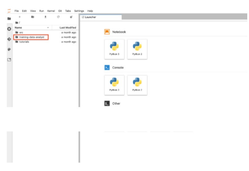
To launch AI Platform Notebooks:

Step 1

Click on the Navigation Menu. Navigate to AI Platforms, then to Notebooks.

Step 2

Click **Open JupyterLab**. A JupyterLab window will open in a new tab. The github repository that you will use should have been already cloned by the Deployment Manager script. The repository is named `training-data-analyst`.



Enable APIs

On the **Navigation menu** (☰), click **APIs & services**.

Scroll down and confirm that your APIs are enabled.

If an API is missing, click **ENABLE APIS AND SERVICES** at the top, search for the API by name, and enable it for your project.

- Cloud AI Platform

Hyperparameter Tuning

Duration is 15 min

Step 1

In the notebook interface, navigate to **training-data-analyst > courses > machine_learning > deepdive > 05_artandscience > labs** and open **b_hyperparam.ipynb**.

Step 2

In the notebook interface, click on **Edit > Clear All Outputs** (click on Edit, then in the drop-down menu, select Clear All Outputs).

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.

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:

- 1 star = Very dissatisfied
- 2 stars = Dissatisfied
- 3 stars = Neutral
- 4 stars = Satisfied
- 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.