Start Lab 02:00:00

Improve model accuracy by hand-tuning hyperparameters

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 by hand-tuning its hyperparameters. In the process, you will learn how to:

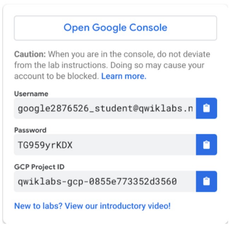
- Use the `LinearRegressor` class in TensorFlow
- Evaluate the accuracy of a model's predictions using Root Mean Squared Error (RMSE)

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.



5. Click **Open Google Console**.

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. This clears your work and removes the project.

Deployment Manager

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

Please wait before launching the Jupyter notebook, otherwise the script may be interrupted and the repository may not be cloned.

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`.

Hand-tuning hyperparameters

Duration is 15 min

Step 1

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

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

Step 3

Now read the narrative and execute each cell in turn.

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.