

00:45:00

- Overview
- Setup
- Launch AI Platform Notebooks
- Clone course repo within your AI Platform Notebooks instance
- Manipulate data with tf.data
- End your lab

★★★★☆

*Duration is 1 min*

In the second part, you will learn how to load a dataset with the `tf.data` API when the dataset resides on disk.


In this lab, you will learn how to:

- Use `tf.data` to read data from memory.
- Use `tf.data` in a training loop.
- Use `tf.data` to read data from disk.
- Write production input pipelines with feature engineering (batching, shuffling, etc.).

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

**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.](#)

Username

1 0076506 1 1 0 1131

google28/6526\_student@qwiklabs.n

Password

TG959yrKDX

GCP Project ID

qwiklabs-gcp-0855e773352d3560

New to labs? View our introductory video!

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**.

7. Accept the terms and skip the recovery resource page.

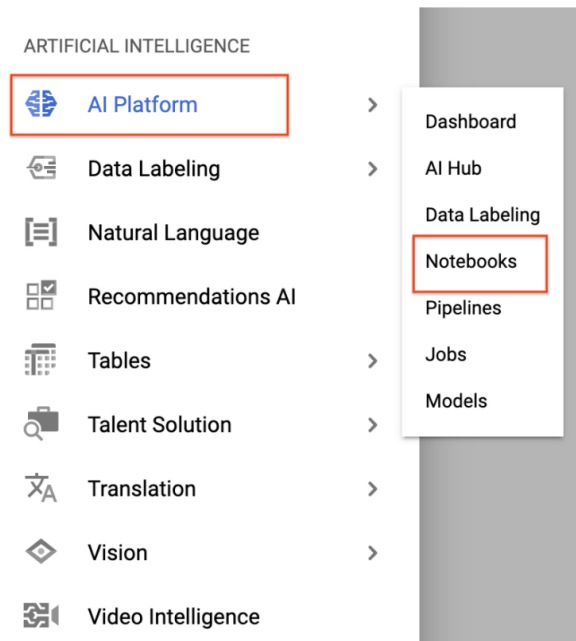
Do not click **End Lab** unless you are finished with the lab or want to restart it. This clears your work and removes the project.

## Launch AI Platform Notebooks

To launch AI Platform Notebooks:

### Step 1

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



### Step 2

On the Notebook instances page, click **+ NEW INSTANCE**. Select the latest version of TensorFlow Enterprise 2.x *Without GPUs*.





In the pop-up, confirm the name of the deep learning VM, move to the bottom of the window and click **Create**.

### New notebook instance

Instance name

Lowercase letters, digits, or '-' only. Must start with a letter. Cannot end with a '-'.

Region \*

Zone \*

Environment ? TensorFlow 2.3 (with Intel® MKL-DNN/MKL)

Machine type 4 vCPUs, 15 GB RAM

Boot disk 100 GB Disk

Subnetwork

External IP Ephemeral(Automatic)

Extensions ? [SELECT EXTENSIONS](#) None selected

Permission Compute Engine default service account

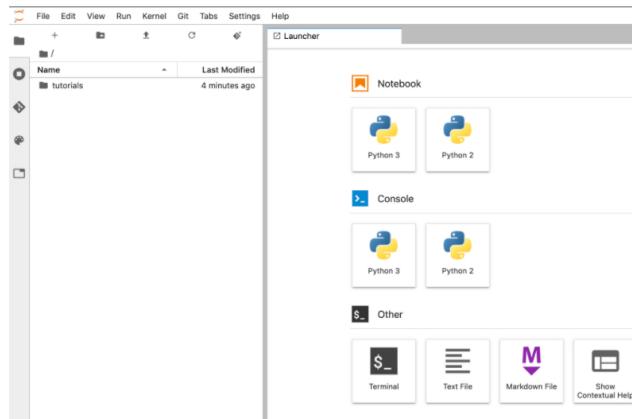
Estimated cost ? \$99.89 monthly, \$0.137 hourly

[CUSTOMIZE](#) [CANCEL](#) [CREATE](#)

The new VM will take 2-3 minutes to start.

### Step 3

Click **Open JupyterLab**. A JupyterLab window will open in a new tab.



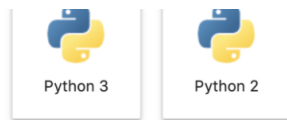
## Clone course repo within your AI Platform Notebooks instance

To clone the `training-data-analyst` notebook in your JupyterLab instance:

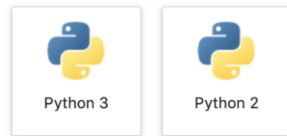
### Step 1

In JupyterLab, click the **Terminal** icon to open a new terminal.

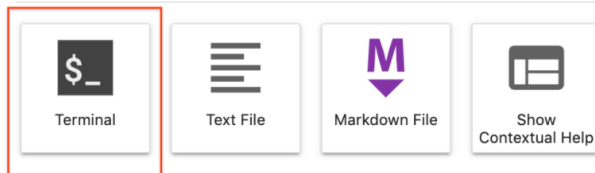




>\_ Console



\$\_ Other



## Step 2

At the command-line prompt, type in the following command and press **Enter**.

```
git clone https://github.com/GoogleCloudPlatform/training-data-analyst
```

## Step 3

Confirm that you have cloned the repository by double clicking on the `training-data-analyst` directory and ensuring that you can see its contents. The files for all the Jupyter notebook-based labs throughout this course are available in this directory.

/ training-data-analyst /		
	Name	Last Modified
	blogs	a minute ago
	bootcamps	a minute ago
	courses	a minute ago
	CPB100	a minute ago
	datalab	a minute ago
	doc	a minute ago
	iot	a minute ago
	quests	a minute ago
	self-paced-labs	a minute ago
	CODEOWNERS	a minute ago
	CONTRIBUTING.md	a minute ago
	LICENSE	a minute ago
	README.md	a minute ago

## Manipulate data with tf.data

Duration is 30 min

### Step 1

In the notebook interface, navigate to `training-data-analyst > courses > machine_learning > deeppdive2 > introduction_to_tensorflow > labs > 2_dataset_api.ipynb`.

## Step 2

In the notebook interface, click **Edit > Clear All Outputs**.

Carefully read through the notebook instructions and fill in lines marked with #TODO where you need to complete the code as needed.

Tip: To run the current cell, click the cell and press **SHIFT + ENTER**. Other cell commands are listed in the notebook UI under **Run**.

- Hints may also be provided for the tasks to guide you along. Highlight the text to read the hints (they are in white text).
- If you need more help, to look at the complete solution, navigate to **training-data-analyst > courses > machine\_learning > deepdive2 > introduction\_to\_tensorflow > solutions**, and open `2_dataset_api.ipynb`.

## 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.

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