



## Data & AI Boot-Kon Event

### Title: Setup your environment: Notebooks & IAM

#### Goal of the lab

- Enable Google cloud services APIs
- Ensure your GCP user and service account have access to the required resources.
- Create GCP default network
- Create Vertex AI notebook for the ML labs.

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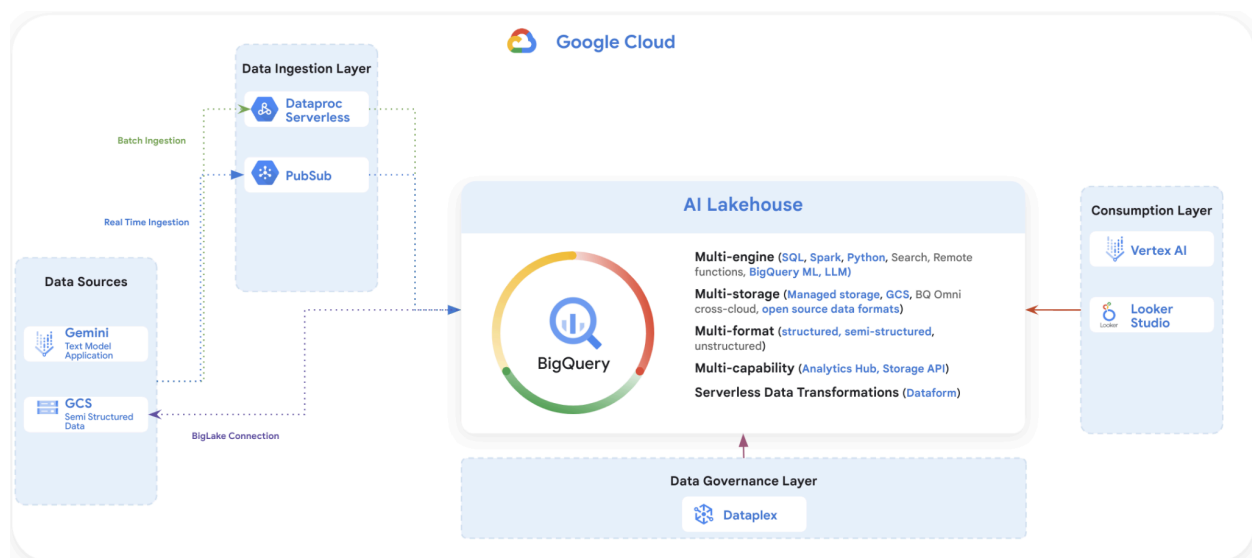
Date: 2024-04-01

Estimated Completion Time: 45 Minutes

#### CAUTION:

This lab is for educational purposes only and should be used with caution in production environments. Google Cloud Platform (GCP) products are changing frequently, and screenshots and instructions might become inaccurate over time. Always refer to the latest GCP documentation for the most up-to-date information.

### Architecture Diagram



### Choice of GCP Product and Service Location

You are free to choose any GCP region location for all labs. Ensure all your resources are created in the chosen location to avoid connectivity issues and minimize latency and cost. If you don't have a preferred GCP location, use **us-central1** for simplicity.

### Setup your environment

1. Open Web Browser in **Incognito Mode**.
2. Open <https://console.cloud.google.com>
3. Login to your GCP console. **Use the provided credentials.**
  - a. Log in with your **gcp\_username** and **gcp\_password**.




b. **Accept the Terms of Service**

Google Cloud

Welcome Star Developer 4751!

Create and manage your Google Cloud instances, disks, networks, and other resources in one place.

 Star Developer 4751  
devstar4751@gcplab.me [SWITCH ACCOUNT](#)

Country  
Germany

Terms of Service  
☒ I agree to the [Google Cloud Platform Terms of Service](#), and the terms of service of [any applicable services and APIs](#).

Email updates  
☐ I would like to receive periodic emails on news, product updates and special offers from Google Cloud and Google Cloud Partners.

[AGREE AND CONTINUE](#)

c. Choose your **project ID**: it should be **gcp\_project\_id** you received by **Email**. Click on select a project and select the project ID (example below)

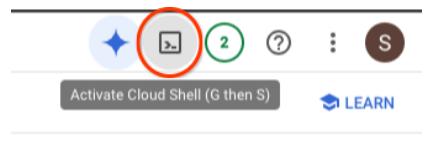
Select a project ▼

Name	ID
▼  No organization	0
★  Boot-Kon Data AI WS-4751	boot-kon-data24ber-4751

Boot-Kon Data AI WS-4751 ▼

d. Initially you have been granted the project editor and IAM project admin roles.

4. Click the **Cloud Shell** icon at the top right of the screen, it will open up a window at the bottom where you can execute commands in the next step. Click continue in the next window.



5. Open this github repository in a new browser tab <https://github.com/fhirschmann/bootkon-h2-2024>

This script **automates** all the steps outlined in the document, including enabling APIs, cloning the repository, setting up IAM permissions, creating a VPC network, and copying files to GCS & creates Instance in Vertex AI.

To use this script:

1. Download the script with the following command:  

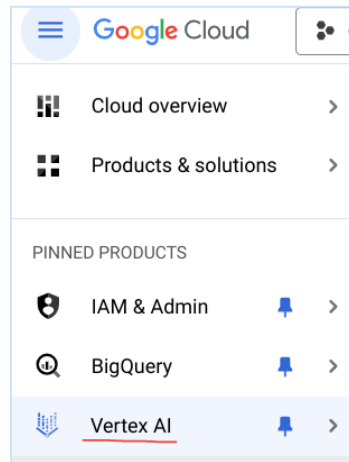
```
wget \
https://raw.githubusercontent.com/fhirschmann/bootkon-h2-2024/refs/heads\
/main/setup_environment.sh
```
2. Make the script executable: `chmod +x setup_environment.sh`



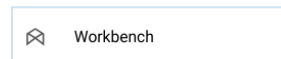
3. Run the script (takes around 3 minutes; may require you to copy an authentication token):  
    `./setup_environment.sh <PROJECT_ID> <GCP_USERNAME> <REGION>`  
    Ex: `./setup_environment.sh bootkon-test24mun-8301 devstar8301 us-central1`

### Finally, we create a Vertex AI Notebook (JupyterLab)

1. Go to Vertex AI in the GCP console.



2. Click on the Workbench section.



3. Select "User managed notebooks"



4. "Create new"



5. Name the notebook "**bootkon**" and leave the default network and environment. Leave the cheapest machine type; e2-standard-4 selected; 4 vCPUs and 16GB of RAM are more than enough to perform the ML labs using jupyter notebooks. Do not attach a GPU. Normally it takes around 10 minutes to get the instance created.





New instance

Name \*

bootkon

Must start with a letter followed by up to 62 lowercase letters, numbers, or hyphens (-) and cannot end with a hyphen

Region \*

us-central1 (Iowa)

?

Zone \*

us-central1-a

?

Operating system \*

Debian 11

?

Environment \*

TensorFlow Enterprise 2.11 (Intel® MKL-DNN/MKL)

?

Selected CUDA libraries provided if GPUs are selected. Includes key packages for handling data, such as scikit-learn, pandas, and NLTK.

☐ Attach 1 NVIDIA T4 GPU

☒ Network in this project

☐ Shared network

Network

default

?

Subnetwork \*

default(10.128.0.0/20)

?

Instance properties

Machine type	e2-standard-4
Data disk	100 GB Standard persistent disk
Permission	Compute Engine default service account
Estimated cost ?	\$117.60 monthly, \$0.16 hourly

ADVANCED OPTIONS

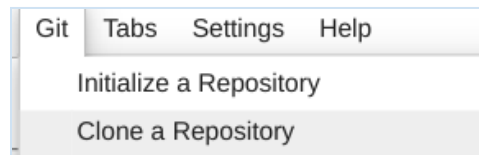
CANCEL

CREATE

- Open the Jupyter Lab;



- From the Jupyter Lab top menu, click on Git -> Clone a Repository



- Enter <https://github.com/fhirschmann/bootkon-h2-2024.git> and click on **clone**

### Clone a repo

Enter the URI of the remote Git repository

- ☒ Include submodules  
☐ Download the repository

Cancel

Clone



🎉 Congratulations on setting up your environment 🎉  
You can now move on to Lab 2

