Start Lab 02:30:00

Momentum Strategies

2 hours 30 minutes Free ★★★★☆

Overview

Momentum trading strategies, based on concepts from physics, attempt to take advantage of stocks' tendencies to continue going either up or down, independent of daily fluctuations. Contrarily, mean-reversion strategies are based on trends reversing direction.

In this lab, you'll apply some of the concepts you have learned behind momentum trading and mean reversion by leveraging the Auquan Toolbox, a Python library that provides tools for developing trading algorithms. When building trading strategies you'll rarely start from scratch. In this lab you'll be given code of a trading strategy implementation that loses money. Your job will be to modify the code so that the strategy makes money.

Objectives

In this lab, you will:

- Take an existing implementation of a momentum trading strategy and modify it so that the strategy makes money.

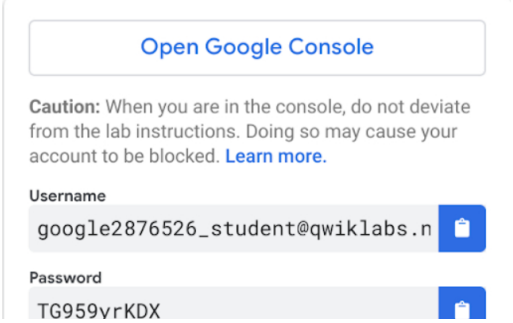
Set up your environment

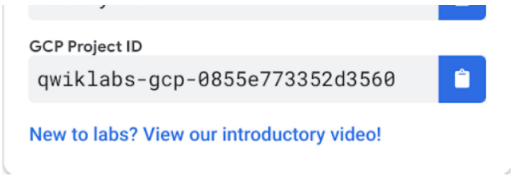
For each lab, you get a new Google Cloud project and set of resources for a fixed time at no cost.

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**.

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

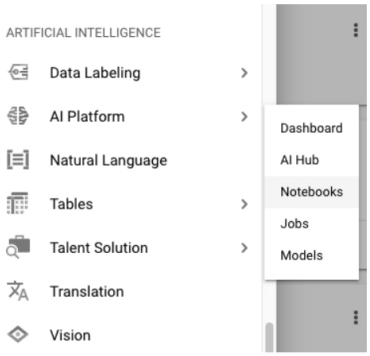
> Do not click **End Lab** unless you are finished with the lab or want to restart it. This clears your work and removes the project.

Launch AI Platform Notebooks

To launch AI Platform Notebooks:

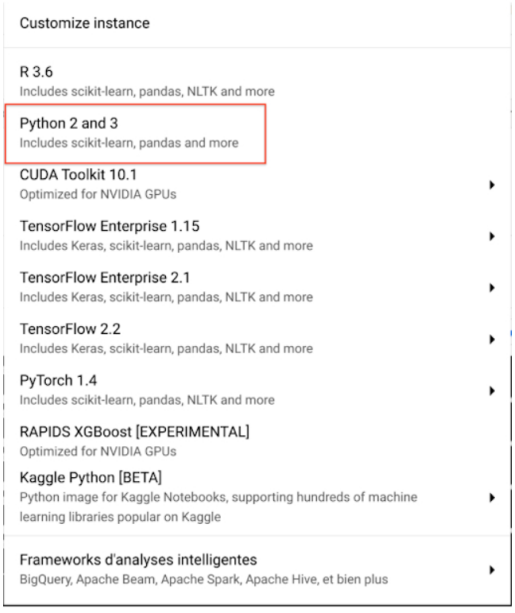
Step 1

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

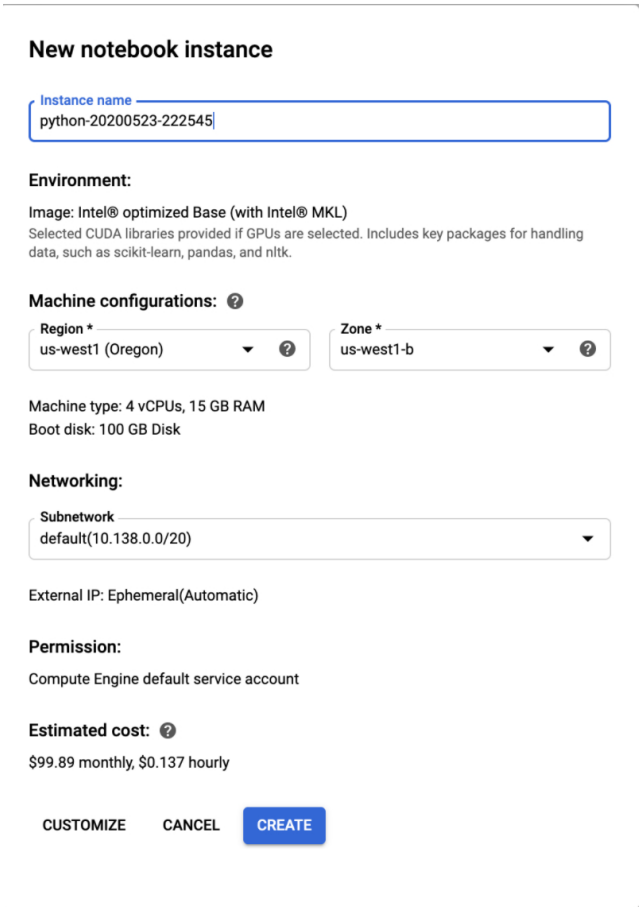


Step 2

On the Notebook instances page, click + NEW INSTANCE . Select the `Python` version:



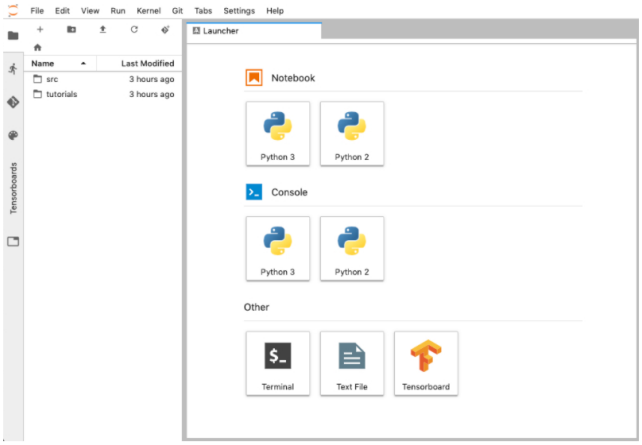
In the pop-up, confirm the name of the instance and click **Create**.



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

Step 3

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

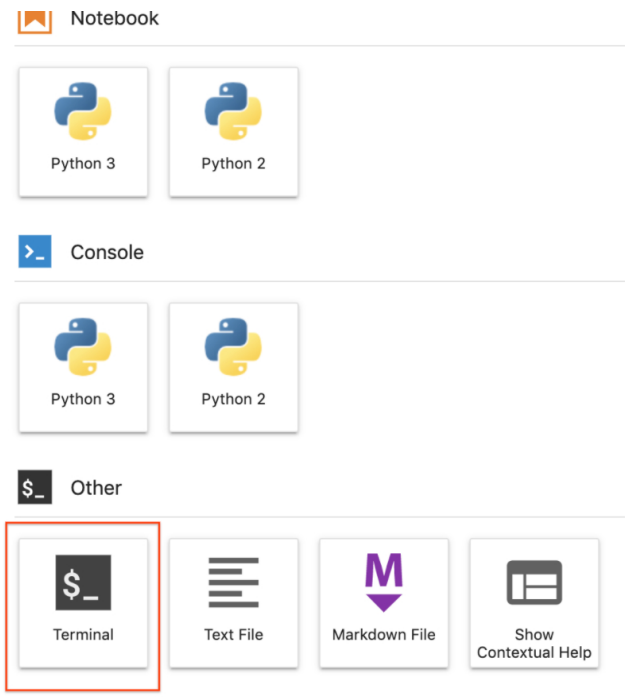


Clone course repository

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

Step 1

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



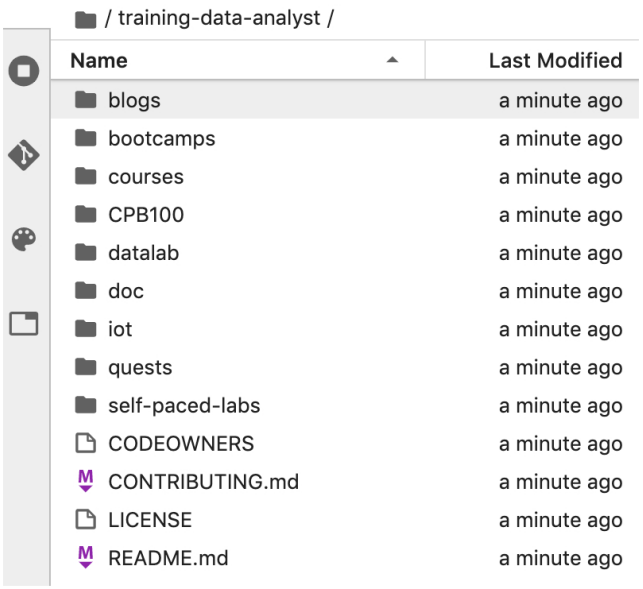
Step 2

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.



Momentum Strategies

Step 1

In the notebook interface, navigate to **training-data-analyst > courses > ai-for-finance > solution** and open **momentum_backtest_losing_money.ipynb**.

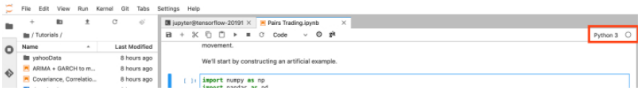
Step 2

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

Tip: To run the current cell you can click the cell and hit **shift+enter**. Other cell commands are found in the notebook UI under **Run**.

Step 3

Ensure you're using the Python 3 kernel by selecting `Python 3` from the upper right corner of the notebook.



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.