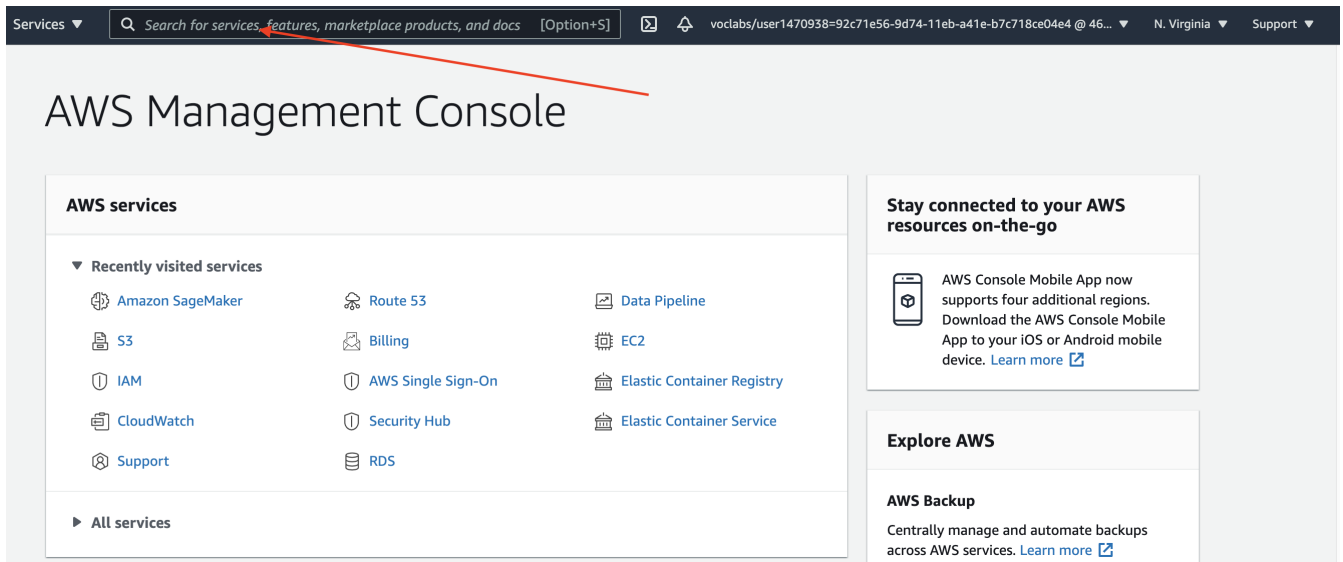


We will be opening the AWS Console through Udacity's **Launch AWS Gateway** button. It should be located on the lefthand side tool bar.

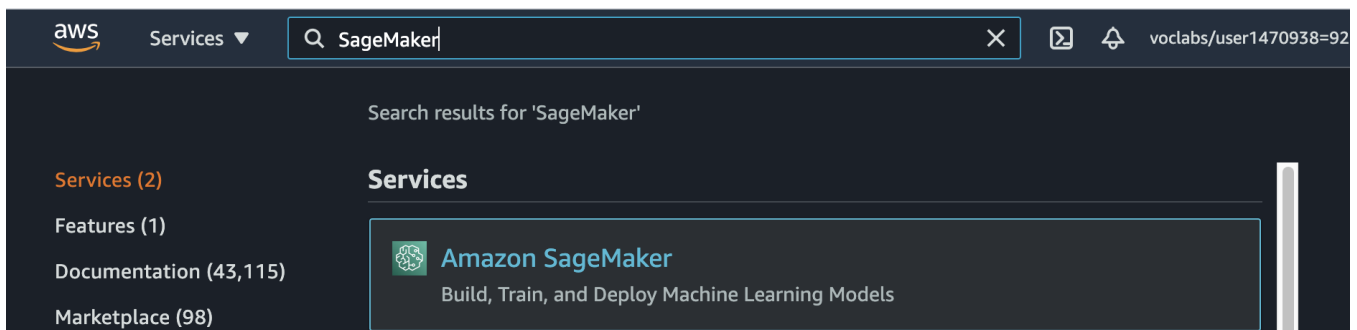


Launch AWS Gateway

Once you open the AWS Console, there is some setup that is required to get Sagemaker Studio up and running. You will be navigating to the Sagemaker studio page and creating your studio IDE. To do that, open up the search bar on the top of the AWS console and search for **sagemaker**.



AWS Console



Sagemaker Search

Navigating to the main Sagemaker page will allow you to then navigate to the Sagemaker Studio page.

Amazon SageMaker X

Amazon SageMaker Studio

Dashboard
Search
Images

► Ground Truth
► Notebook
► Processing
► Training
► Inference
► Edge Manager
► Augmented AI
► AWS Marketplace

MACHINE LEARNING

Amazon SageMaker

Build, train, and deploy machine learning models at scale

The quickest and easiest way to get ML models from idea to production.

Get started

Explore SageMaker Studio, a machine learning Integrated Development Environment (IDE) for building, training, and debugging models, tracking experiments, deploying models, and monitoring their performance.

SageMaker Studio

Pricing (US)

With Amazon SageMaker, you pay only for what you use. Authoring, training and hosting is billed by the second, with no minimum fees and no upfront commitments.

[Learn more](#)

How it works

Three icons illustrating the workflow: 1. A person at a computer with a gear icon. 2. A document with a gear icon. 3. A cloud with a gear icon and a person icon.

Sagemaker Page

You'll be prompted to create a Sagemaker Studio instance. In order to do that, follow the **Quick start** settings. It will require you to create an **Execution role** if you do not have one already.

Amazon SageMaker > SageMaker Studio

SageMaker Studio

Get started

[Learn more about getting started with SageMaker Studio](#)

Quick start

Let Amazon SageMaker handle configuring account and setting the permissions that you or a team in your organization need to use SageMaker Studio. Choosing this option uses standard encryption, which you can't change. If you need more control over configuration, choose Standard setup.

User name

default-1623543013846

The user name can have up to 63 characters. Valid characters: A-Z, a-z, 0-9, and - (hyphen)

Execution role

SageMaker Studio requires permissions to access other AWS services, such as Amazon SageMaker and Amazon S3. The execution role must have the [AmazonSageMakerFullAccess policy](#) attached. If you don't have a role with this policy attached, we can create one for you.

Choose an IAM role

SageMaker Projects and JumpStart New

Enable access and provisioning of AWS Service Catalog Portfolio of products in Amazon SageMaker Studio for Amazon SageMaker Projects and JumpStart. [Learn more](#)

Enable Amazon SageMaker project templates and JumpStart for this account and Studio users

If enabled, the administrator can view the Amazon SageMaker provided project templates and JumpStart solutions published in AWS Service Catalog and users who are configured to use the domain execution are allowed to create projects using those templates and solutions with JumpStart. A launch constraint role and a project use role are automatically generated in IAM for your account.

Standard setup

Control all aspects of account configuration, including permissions and encryption. Choose this option if you are an administrator setting up SageMaker Studio for your organization.

Cancel **Submit**

SageMaker Studio

Select the **Create a new role** from the drop down.

Execution role

SageMaker Studio requires permissions to access other AWS services, such as Amazon SageMaker and Amazon S3. The execution role must have the [AmazonSageMakerFullAccess policy](#) attached. If you don't have a role with this policy attached, we can create one for you.

Choose an IAM role

Create a new role

Enter a custom IAM role ARN

Create new sagemaker role

When creating the IAM role, you can leave the defaults as they are, just click on

Create role

Create an IAM role

Passing an IAM role gives Amazon SageMaker permission to perform actions in other AWS services on your behalf. Creating a role here will grant permissions described by the [AmazonSageMakerFullAccess](#) IAM policy to the role you create.

The IAM role you create will provide access to:

- ☒ S3 buckets you specify - *optional*
 - ☒ Any S3 bucket

Allow users that have access to your notebook instance access to any bucket and its contents in your account.
 - ☐ Specific S3 buckets

Example: `bucket-name-1, bucket-name-2`

Comma delimited. ARNs, "*" and "/" are not supported.
 - ☐ None
- ☒ Any S3 bucket with "sagemaker" in the name
- ☒ Any S3 object with "sagemaker" in the name
- ☒ Any S3 object with the tag "sagemaker" and value "true" [See Object tagging](#)
- ☒ S3 bucket with a Bucket Policy allowing access to SageMaker [See S3 bucket policies](#)

Cancel
Create role

Default S3 Access

When it is successfully created, make sure it is selected in the **Execution role** drop down selection. You can then click the **Submit** button to start creating your Sagemaker Studio.

Get started

[Learn more about getting started with SageMaker Studio](#)

- ☒ **Quick start**

Let Amazon SageMaker handle configuring account and setting the permissions that you or a team in your organization need to use SageMaker Studio. Choosing this option uses standard encryption, which you can't change. If you need more control over configuration, choose Standard setup.

User name

default-1623543013846

The user name can have up to 63 characters. Valid characters: A-Z, a-z, 0-9, and - (hyphen)

Execution role

SageMaker Studio requires permissions to access other AWS services, such as Amazon SageMaker and Amazon S3. The execution role must have the [AmazonSageMakerFullAccess policy](#) attached. If you don't have a role with this policy attached, we can create one for you.

AmazonSageMaker-ExecutionRole-20210612T171185

☒ **Success! You created an IAM role.**

[AmazonSageMaker-ExecutionRole-20210612T171185](#)

SageMaker Projects and JumpStart New

Enable access and provisioning of AWS Service Catalog Portfolio of products in Amazon SageMaker Studio for Amazon SageMaker Projects and JumpStart. [Learn more](#)

- ☒ **Enable Amazon SageMaker project templates and JumpStart for this account and Studio users**

If enabled, the administrator can view the Amazon SageMaker provided project templates and JumpStart solutions published in AWS Service Catalog and users who are configured to use the domain execution are allowed to create projects using those templates and solutions with JumpStart. A launch constraint role and a project use role are automatically generated in IAM for your account.
- ☐ **Standard setup**

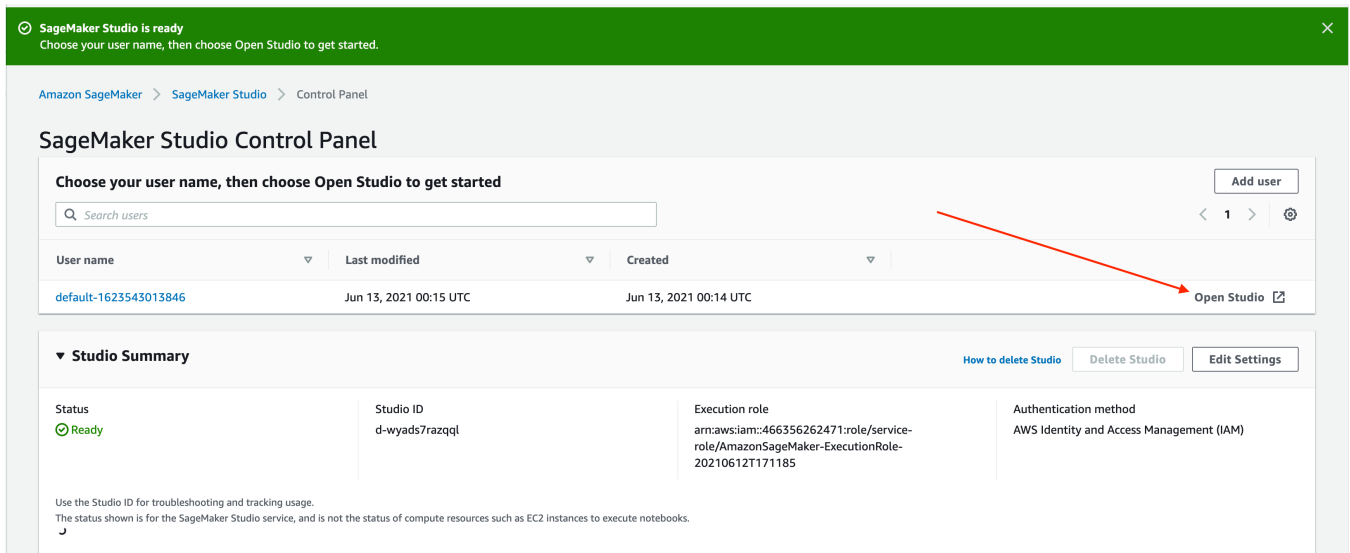
Control all aspects of account configuration, including permissions and encryption. Choose this option if you are an administrator setting up SageMaker Studio for your organization.

Cancel
Submit

Sagemaker Studio Get Started

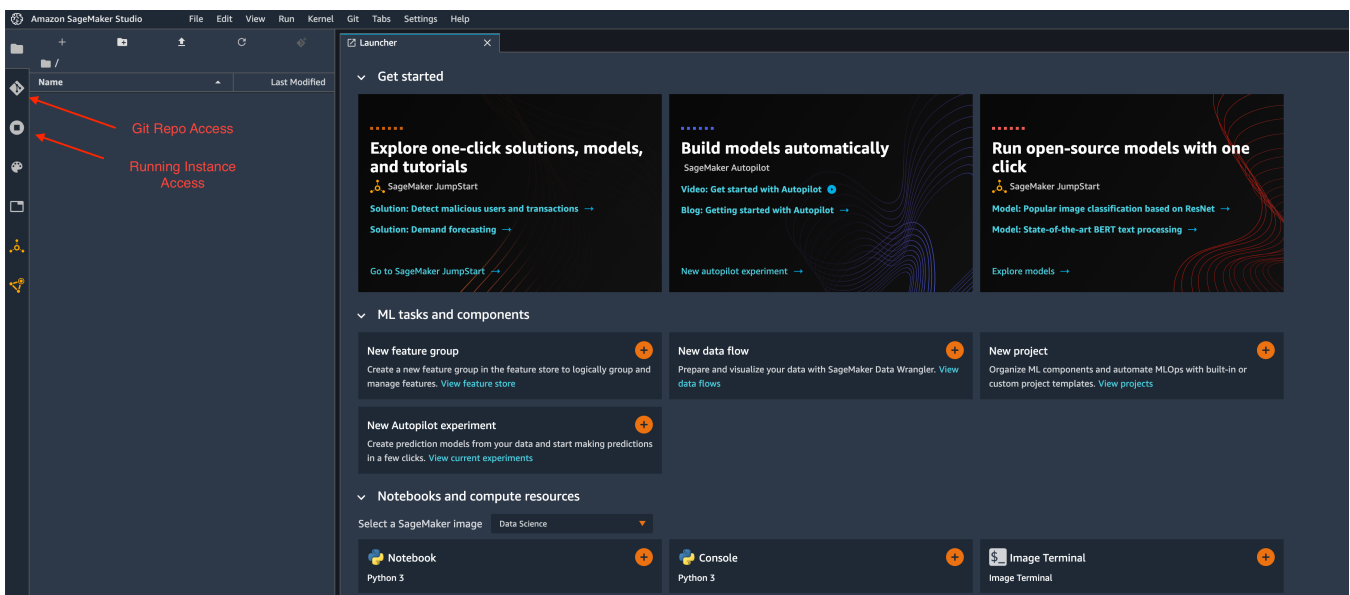
It will take some time for Sagemaker to provision your studio instance. When it's complete, you will see a new user in the Sagemaker Studio Control Panel.

To open up your Sagemaker Studio, click on the **Open Studio** button available to your Sagemaker User.



Sagemaker Studio Ready

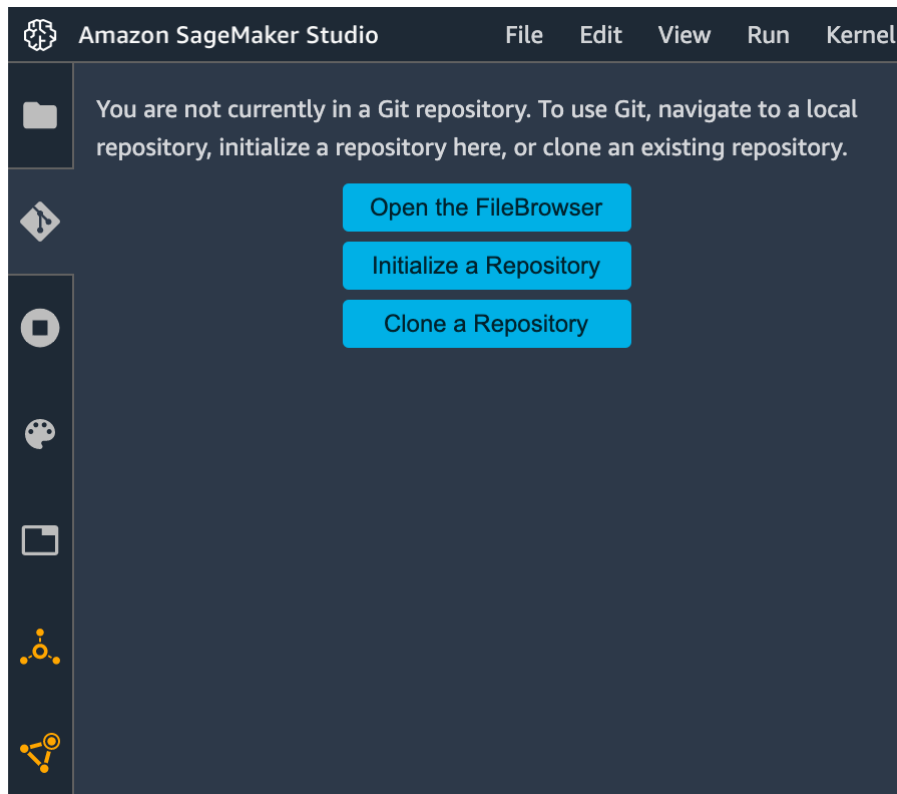
Sagemaker will open a new window where your Sagemaker Studio instance will be started. There you have several options, but on the left hand side there is a tool bar. Most importantly, you'll find a Git repository button to clone the course repository into Sagemaker Studio, as well as a running instance button, which controls which instances are running in Sagemaker Studio.



Sagemaker Studio IDE

To clone your git repository, click the git button on the left side, and select

Clone a Repository in the available options.

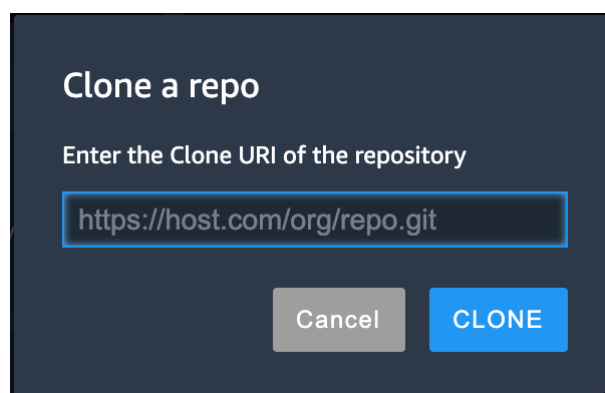


Clone Git Repo

Paste the Github link of the repository. Use this link to clone the repository:

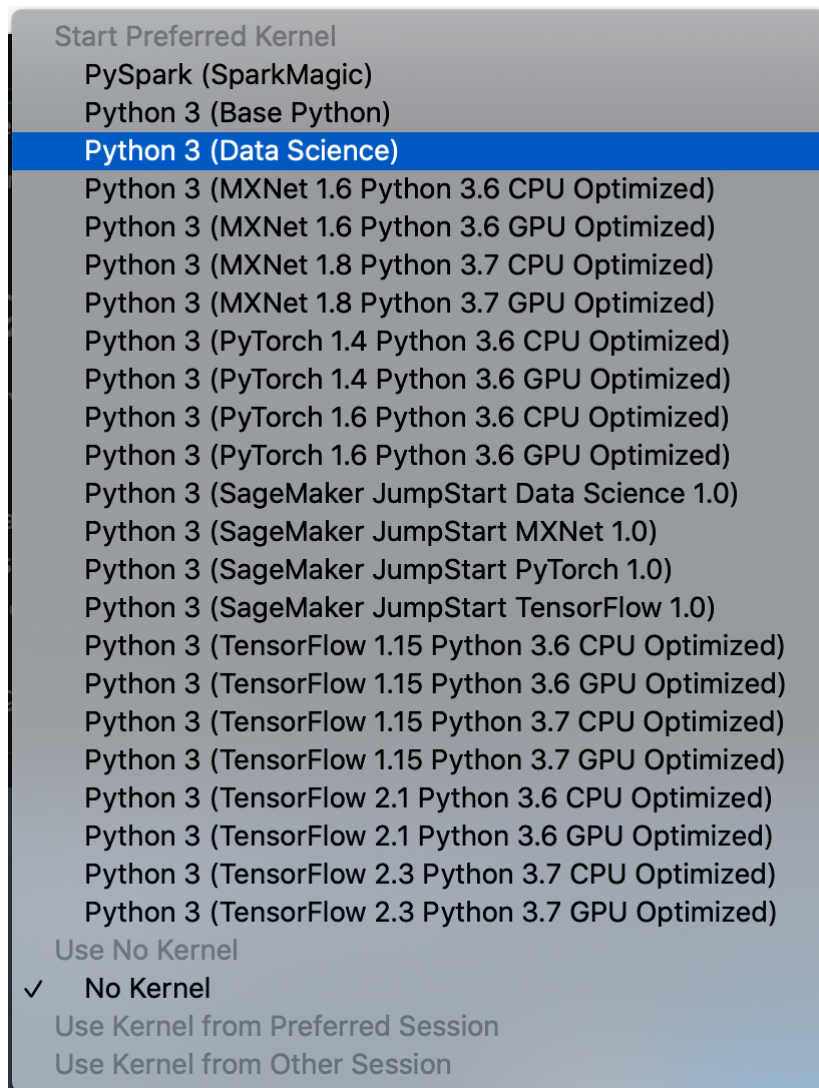
[nd009t-c1-intro-to-ml-templates](https://github.com/udacity/nd009t-c1-intro-to-ml-templates)

or in the raw form: `https://github.com/udacity/nd009t-c1-intro-to-ml-templates`



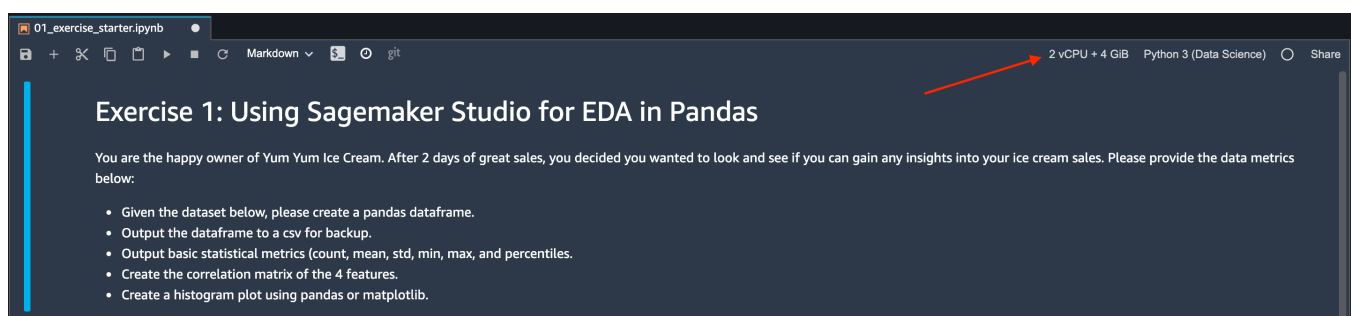
Enter Clone Repo

To run an instance you'll need to select a Kernel. Select **Python 3 (Data Science)**.



Select Kernel

Selecting a kernel will provision an compute instance to run your notebook on.



Current Instance being Run

You can always adjust which instance you want to run. By default use the `m1.t3.medium` for the entire course.

Select Instance

Running notebook
01_exercise_starter.ipynb

Current instance type
Unknown **unknown**

If you change your instance, existing settings for this notebook will be lost, and installed packages will not be carried over.

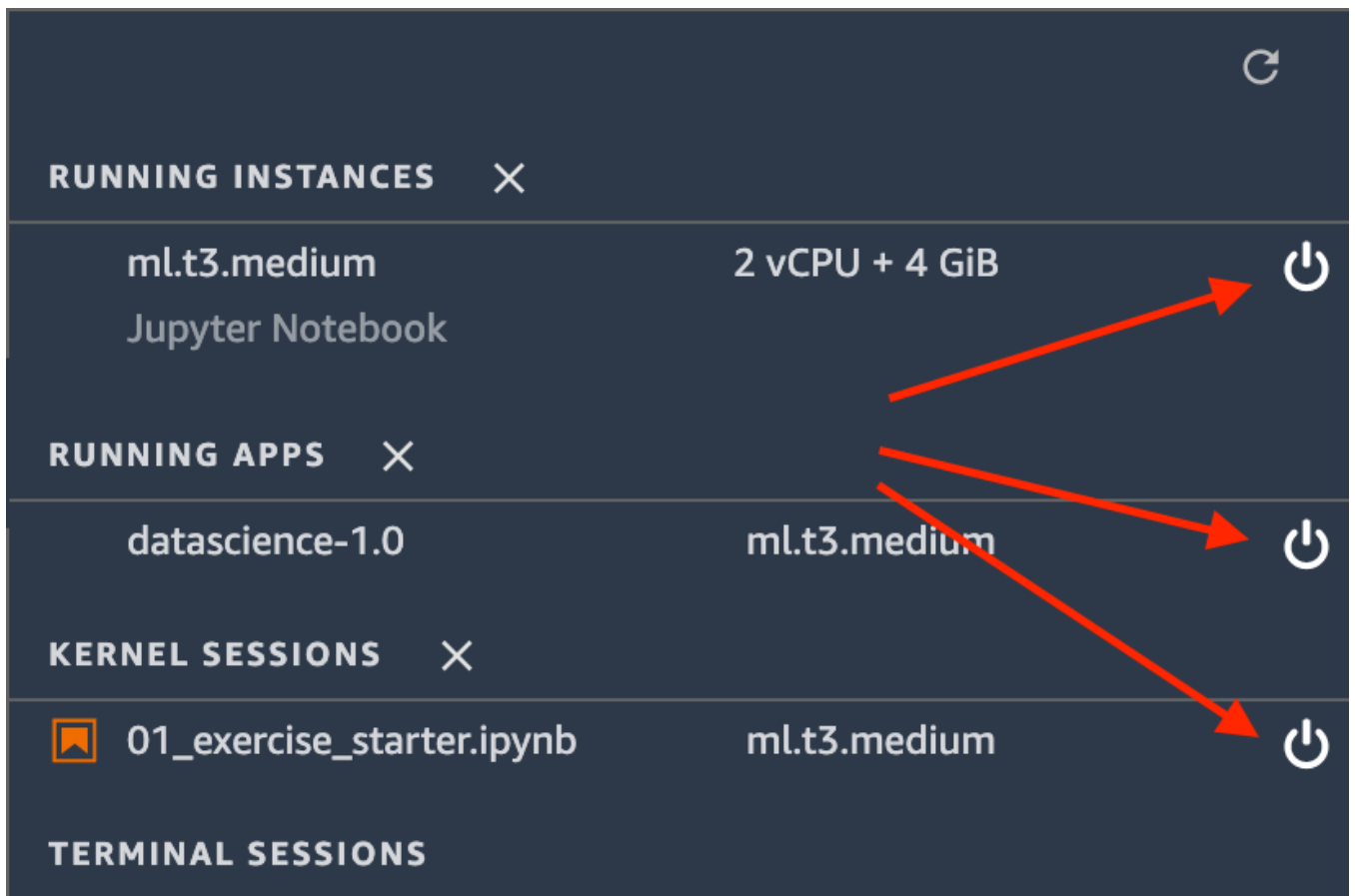
Instances 4 of 29 Fast launch only

Instance Type	Instance Category	vCPU	GPU	Memory	Fast Launch
<input checked="" type="radio"/> ml.t3.medium	General purpose	2	0	4 GiB	✓
<input type="radio"/> ml.g4dn.xlarge	Accelerated computing	4	1	16 GiB	✓
<input type="radio"/> ml.m5.large	General purpose	2	0	8 GiB	✓
<input type="radio"/> ml.c5.large	Compute optimized	2	0	4 GiB	✓

Cancel Save and continue

Select Studio Instance Type If Needed

Before leaving your Sagemaker Studio workspace, always be sure to shut down all running instances and kernels. You access the running instances on the left hand side tool bar.



The screenshot displays the AWS SageMaker console interface with a dark theme. At the top right is a refresh icon. The main content is divided into four sections, each with a title and a close button (X):

- RUNNING INSTANCES**: Contains one entry, 'ml.t3.medium Jupyter Notebook', with '2 vCPU + 4 GiB' specified. A red arrow points from this entry to a power-off icon.
- RUNNING APPS**: Contains one entry, 'datascience-1.0', with 'ml.t3.medium' specified. A red arrow points from this entry to a power-off icon.
- KERNEL SESSIONS**: Contains one entry, '01_exercise_starter.ipynb', with 'ml.t3.medium' specified. A red arrow points from this entry to a power-off icon.
- TERMINAL SESSIONS**: This section is currently empty.

Each entry in the first three sections has a power-off icon (a circle with a vertical line) on the right side.

Turn off instances