

Use machine learning environments offered by SageMaker

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Important

Amazon SageMaker Studio and Amazon SageMaker Studio Classic are two of the machine learning environments that you can use to interact with SageMaker.

If your domain was created after November 30, 2023, Studio is your default experience.

If your domain was created before November 30, 2023, Amazon SageMaker Studio Classic is your default experience. To use Studio if Amazon SageMaker Studio Classic is your default experience, see [Migrating from Amazon SageMaker Studio Classic](#).

When you migrate from Amazon SageMaker Studio Classic to Amazon SageMaker Studio, there is no loss in feature availability. Studio Classic also exists as an IDE within Amazon SageMaker Studio to help you run your legacy machine learning workflows.

SageMaker supports the following machine learning environments:

- **Amazon SageMaker Studio (Recommended):** The latest web-based experience for running ML workflows with a suite of IDEs. Studio supports the following applications:



- Amazon SageMaker Studio Classic
- Code Editor, based on Code-OSS, Visual Studio Code - Open Source
- JupyterLab
- Amazon SageMaker Canvas
- RStudio
- *Amazon SageMaker Studio Classic*: Lets you build, train, debug, deploy, and monitor your machine learning models.
- *Amazon SageMaker Notebook Instances*: Lets you prepare and process data, and train and deploy machine learning models from a compute instance running the Jupyter Notebook application.
- *Amazon SageMaker Studio Lab*: Studio Lab is a free service that gives you access to AWS compute resources, in an environment based on open-source JupyterLab, without requiring an AWS account.
- *Amazon SageMaker Canvas*: Gives you the ability to use machine learning to generate predictions without needing to code.
- *Amazon SageMaker geospatial*: Gives you the ability to build, train, and deploy geospatial models.
- *RStudio on Amazon SageMaker*: RStudio is an IDE for [R](#), with a console, syntax-highlighting editor that supports direct code execution, and tools for plotting, history, debugging and workspace management.
- *SageMaker HyperPod*: SageMaker HyperPod lets you provision resilient clusters for running machine learning (ML) workloads and developing state-of-the-art models such as large language models (LLMs), diffusion models, and foundation models (FMs).

To use these machine learning environments, except Studio Lab, SageMaker Notebook Instances, and SageMaker HyperPod, you or your organization's administrator must create an Amazon SageMaker domain. Studio Lab has a separate onboarding process.

Instead of manually provisioning resources and managing permissions for yourself and your users, you can create an Amazon DataZone domain. The process of creating an Amazon

DataZone domain creates a corresponding Amazon SageMaker domain along with AWS Glue or Amazon Redshift databases for your ETL workflows. Setting up a Amazon SageMaker domain through Amazon DataZone reduces the amount of time it takes to set up SageMaker environments for your users. For more information about setting up a Amazon SageMaker domain within Amazon DataZone, see [Setting up SageMaker Assets \(administrator guide\)](#).

Users within the Amazon DataZone domain have permissions to all Amazon SageMaker actions, but their permissions are scoped down to resources within the Amazon DataZone domain.

In addition to being a streamlined way to create a Amazon SageMaker domain, creating a Amazon DataZone domain also allows your users to share data and models with each other. For information about how they can share data and models, see [Create and share assets with Amazon SageMaker Assets](#).

Topics

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