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  - Get started with OpenAI's services
  - Let's create a virtual machine
  - Use a notebook

# Note

- This slide was created for the April 18, 2025 UTokyo Azure Usage Briefing.
- Azure specifications change frequently, so if the following does not work, please [refer to the Azure documentation](#).

# Use a notebook

If you want to develop using **Jupyter Notebook** such as **Google Colaboratory**,  
you can use **Azure Machine Learning**.

Please refer to the [official notebook tutorial](#) as well.

# Purpose

- In this session, we will use a service called "**Azure Machine Learning**".
- Just like Google Colab, it allows you to implement and run code in an interactive environment (Jupyter Notebook).
- Roadmap:
  1. Create a Workspace
  2. Set up Compute Resources
    - Choose and deploy a machine to run your code.
    - If left idle for a while, it will automatically stop (billing for compute is also paused).
    - You can create multiple machines and switch between them.
  3. Creating a File (Notebook)
    - Create a notebook consisting of "code cells" and "markdown cells"
    - Similar to Google Colab, you can run a code cell and see the results instantly
  4. Get started with VS Code
    - A code editor loved by programmers around the world
    - Advanced extensions such as debugger and Github Copilot are also available.

1. Create a workspace

My Dashboard - Microsoft Azure

portal.azure.com/#home

Copilot

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Microsoft Azure

Azure services

All Services (99+) Marketplace (31) More (4)

Services

Azure Machine Learning  
Azure Managed Grafana  
Azure Managed Instance  
Azure Managed Lustre

See more

Kubernetes services  
Virtual machines  
App Services  
More services

Resources

Recent Favorite

Name

Alfoundarytest  
openai\_test1  
1923306880-Yan

See all

Last Viewed

2 days ago  
2 days ago  
3 days ago

Marketplace

Azure Machine Learning  
Azure AI Foundry  
Azure Maps  
Azure Managed Grafana

Documentation

Deploy IBM Maximo Application Suite (MAS) on Azure - Azure Architecture

Continue searching in Microsoft Entra ID

Give feedback

Searching all subscriptions.

Subscriptions Resource groups All resources Dashboard

A Azure Machine Learning - Micro +

portal.azure.com/#browse/Microsoft.MachineLearningServices%2fworkspaces

Microsoft Azure Search resources, services, and docs (G+)

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Home >

# Azure Machine Learning

The University of Tokyo (univtoku.onmicrosoft.com)

+ Create Recently deleted Manage view Refresh Export to CSV Open query Assign tags

New workspace For ML projects and teams

New registry For sharing ML assets across workspaces

equals all Type equals all Resource group equals all Location equals all Add filter

No grouping List view

Resource group ↑↓ Type ↑↓ Location ↑↓ Subscription ↑↓

No workspaces to display

Workspaces are where you manage all the models, assets, and data related to your machine learning projects. Create one now to start using Azure Machine Learning.

Learn more ↗

Give feedback

This screenshot shows the Azure Machine Learning workspace management interface. At the top, there's a navigation bar with links for Home, Microsoft Azure, and a search bar. Below the navigation is a toolbar with various icons for creating, managing, and exporting resources. A prominent red circle highlights the 'New workspace' button, which is intended for ML projects and teams. The main content area displays a large gray 3D pyramid icon and the text 'No workspaces to display'. Below this, there's a paragraph explaining what workspaces are and a 'Learn more' link. On the right side, there are buttons for 'No grouping' and 'List view', and filters for Resource group, Type, Location, and Subscription. The bottom right corner has a 'Give feedback' link.



Azure Machine Learning - Micro +

portal.azure.com/#view/Microsoft\_Azure\_MLTeamAccounts/CreateMachineLearningServicesBladeV2/\_provisioningContext~/%7B"initialValues"%3A%7B"subscriptionId": "00000000-0000-0000-0000-000000000000", "resourceGroup": "ML-workspace", "location": "East US", "storageAccount": "(new) mlworkspace5877508646", "keyVault": "(new) mlworkspace9437206468", "applicationInsights": "(new) mlworkspace8039569950", "containerRegistry": "None", "inboundAccess": "Allow", "outboundAccess": "Allow", "tags": ""%7D"}

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Microsoft Azure Search resources, services, and docs (G+)

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Home > Azure Machine Learning >

# Azure Machine Learning

Create a machine learning workspace

## Workspace details

Configure your basic workspace settings like its storage connection, authentication, container, and more. [Learn more](#)

Name \*  ⓘ

Region \*   ⓘ

Storage account \*   ⓘ

[Create new](#)

Key vault \*   ⓘ

[Create new](#)

Application insights \*   ⓘ

[Create new](#)

Container registry   ⓘ

[Create new](#)

[Review + create](#)

< Previous

Next : Inbound Access



Home > Azure Machine Learning >

# Azure Machine Learning

Create a machine learning workspace

Basics

Inbound Access

**Outbound Access**

Encryption

Identity

Tags

Review + create

## Network isolation

Choose the type of network isolation you need for your workspace, from not isolated at all to an entirely separate virtual network managed by Azure Machine Learning. [Learn more about managed network isolation](#)

Public

- Compute can access public resources
- Outbound data movement is unrestricted

Allow Internet Outbound

- Compute can access private resources
- Outbound data movement is unrestricted

Allow Only Approved Outbound

- Compute can access allowlisted resources only
- Outbound data movement is restricted to approved targets

**Review + create**

< Previous

Next : Encryption

Home > Azure Machine Learning >

# Azure Machine Learning

Create a machine learning workspace

Validation passed

Basics Inbound Access Outbound Access Encryption Identity Tags Review + create

## Basics

Subscription	1923306880-YamakataTraining
Resource group	(New) (new)ML-test
Region	East US
Name	ML-workspace
Storage account	(new) mlworkspace5877508646
Key vault	(new) mlworkspace9437206468
Application insights	(new) mlworkspace8039569950
Container registry	None

## Networking

Create

< Previous

Next >

Download a template for automation

A Azure Machine Learning - Micro +

portal.azure.com/#view/Microsoft\_Azure\_MLTeamAccounts/CreateMachineLearningServicesBladeV2/\_provisioningContext~/%7B"initialValues"%3A%7B"subscriptionId": "1923306880-YamakataTraining", "resourceGroup": "(New) (new)ML-test", "location": "East US", "name": "ML-workspace", "storageAccount": "(new) mlworkspace5877508646", "keyVault": "(new) mlworkspace9437206468", "applicationInsights": "(new) mlworkspace8039569950", "containerRegistry": "None", "networking": {"connectivityMethod": "Enable public access from all networks", "networkIsolation": "Public"}%7D"

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Home > Azure Machine Learning >

# Azure Machine Learning

Create a machine learning workspace

Basics Inbound Access Outbound Access Encryption Identity Tags Review + create

Basics

Subscription	1923306880-YamakataTraining
Resource group	(New) (new)ML-test
Region	East US
Name	ML-workspace
Storage account	(new) mlworkspace5877508646
Key vault	(new) mlworkspace9437206468
Application insights	(new) mlworkspace8039569950
Container registry	None

Networking

Connectivity method	Enable public access from all networks
Network isolation	Public

Submitting deployment...  
Submitting the deployment template for resource group '(new)ML-test'.

Create < Previous Next > Download a template for automation

Home >



## Microsoft.MachineLearningServices | Overview

Deployment

 X <<

>Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

### Deployment is in progress

Deployment name : Microsoft.MachineLearnin... Start time : 4/8/2025, 5:01:20 PM  
Subscription : 1923306880-YamakataTrai... Correlation ID : b1f26844-e165-42b8-be43...  
Resource group : (new)ML-test

#### Deployment details

Resource	Type	Status	C
There are no resources to display.			



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Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.

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Home >

## Microsoft.MachineLearningServices | Overview

Deployment



Overview

Inputs

Outputs

Template



Delete



Cancel



Redeploy



Download



Refresh

### ✓ Your deployment is complete



Deployment name : Microsoft.MachineLearnin... Start time : [REDACTED]  
Subscription : 1923306880-YamakataTrai... Correlation ID : b1f26844-e165-42b8-be43...  
Resource group : (new)ML-test

> Deployment details

▽ Next steps

Go to resource



### Cost management

Get notified to stay within your budget and prevent unexpected charges on your bill.

[Set up cost alerts >](#)



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### Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure

# ML-workspace

## Azure Machine Learning workspace

 Search

◇ ◇

 Download config.json  Delete

 Overview

## Activity log

## Access control (IAM)

Tags

## Diagnose and solve problems

 Resource visualizer

 Events

> Settings

## > Monitoring

>> Automation

#### > Support + troubleshooting

## Storage

[mlworkspace587750864](#)

## Provisioning State

Succeeded

## Application Insights

mlworkspace8039569950

## MLflow tracking URI

[azureml://eastus.api.azureml.ms/mlflow/v1.0/subscriptions/a600356...](https://azureml://eastus.api.azureml.ms/mlflow/v1.0/subscriptions/a600356...)



## Work with your models in Azure Machine Learning Studio

The Azure Machine Learning Studio is a web app where you can build, train, test, and deploy ML models. Launch it now to start exploring, or [learn more about the Azure Machine Learning studio](#)

## Launch studio

A ML-workspace - Microsoft Azure × Azure AI | Machine Learning Studio + ml.azure.com/?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/workspaces/ML... 📈 ⚡ 本人確認を行ってください

# Azure AI | Machine Learning Studio

All workspaces

## ML-workspace

Generate AI with Prompt flow

Notebooks (circled)

Multi-Round Q&A on Your Data

Create a chatbot that uses LLM and data from your own indexed files to ground multi-round question and answering capabilities in enterprise chat scenarios.

Start Clone

Q&A on Your Data

Use LLM and data from your own indexed files to ground multi-round question and answering capabilities.

Start Clone

Web Classification

Use LLM to classify URLs into multiple categories.

Start Clone

Chat with Wikipedia

Create a chatbot that leverages Wikipedia data to ground the responses.

Start Clone

Use GPT I

Learn how to extend the capabilities of your AI with external data

Start

## Generative AI models

View all < >

Llama-4-Scout-17B-16E-Instruct

Chat completion

Llama-4-Maverick-17B-128E-I...

Chat completion

Llama-4-Scout-17B-16E

Chat completion

Llama-3.2-11B-Vision-Instruct

Chat completion

supply

Chat completion

## Notebook samples

View all

Compute

A ML-workspace - Microsoft Azure × Notebooks - Azure AI | Machine Learning Studio + ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 📁 ⚡ ☆ 本人確認を行ってください Azure AI | Machine Learning Studio 1923306880-YamakataTraining ML-workspace

The University of Tokyo > ML-workspace > Notebooks

All workspaces Home Model catalog Authoring Notebooks Automated ML Designer Prompt flow Assets Data Jobs Components Pipelines Environments Models Endpoints Manage Compute

Notebooks

Files Samples

Users 2573969490

Notebooks is your space to add, browse, and edit files.

You can add files of any type, including Jupyter Notebooks (.ipynb). The files you see here are stored in the workspace file share, and are accessible and shared within the workspace.

In order to run notebooks and scripts, you must connect to an Azure Machine Learning compute resource. Once a notebook or terminal is connected, you can access all workspace assets including experiment details, data, models, and more. [Learn more](#)

+ Files Create compute

[View Azure Machine Learning tutorials](#)  
[View Release Notes to learn more about the latest features](#)  
[Notebooks documentation](#)



## 2. Create a compute

You need to create a “**Compute instance**,” which is the environment where your code runs.

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Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Notebooks

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Authoring

Notebooks (selected)

Automated ML Designer Prompt flow

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Notebooks documentation



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← A Create compute instance

1 Required settings

2 Scheduling optional

3 Security optional

4 Applications optional

5 Tags optional

6 Review

**Configure required settings**  
Select the name and virtual machine size you would like to use for your compute instance

Note that a compute instance can not be shared. It can only be used by a single assigned user. By default, it will be assigned to the creator and you can change this to a different user in the Security step.

Compute name \* ⓘ E4machine

Virtual machine type ⓘ

CPU GPU

Virtual machine size ⓘ

Select from recommended options Select from all options

Name ↑	Category	Workload types
Standard_DS11_v2 2 cores, 14GB RAM, 28GB storage	Memory optimized	Development on Notebook weight testing
Standard_DS3_v2 4 cores, 14GB RAM, 28GB storage	General purpose	Classical ML model training on small datasets
Standard_E4ds_v4	Memory optimized	Data manipulation and training on medium-sized datasets

Compare the prices and specifications, and choose the one that best for your purpose.

Review + Create Back Next Cancel

# Price (example)

- Prices vary depending on the region (“Japan” is expensive)
- “Japan” may be safer for processing sensitive data?

Instance	vCPU(s)	RAM	East US	Japan
E2 v3	2	16 GiB	¥19.852/hour	¥25.209/hour
E4 v3	4	32 GiB	¥39.704/hour	¥50.418/hour
E8 v3	8	64 GiB	¥79.408/hour	¥100.836/hour
E16 v3	16	128 GiB	¥158.816/hour	¥201.671/hour

You can also use a GPU, but...  
(A100x8 for ¥4,285 per 1 hour!)

ND A100 v4 series

Instance	Core(s)	RAM	GPU	
ND96asr A100 v4	96	900 GiB	8x A100 (NVlink)	¥4,285.024/hour

East US

ML-workspace - Microsoft Azure

Notebooks - Azure AI | Machine Learning Studio

ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 15

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Azure AI | Machine Learning Studio

Create compute instance

Required settings

Scheduling optional

Security optional

Applications optional

Tags optional

Review

Review or make changes to your job before submission. [Download a template for automation.](#)

Required settings

Compute name: E4machine

Virtual machine: Standard\_E4ds\_v4

Virtual machine type: CPU

Scheduling

Auto shutdown: Enabled by default

Auto shutdown: After 60 minutes of inactivity

Start up and shutdown schedule: --

Security

Enable SSH: no

Enable SSO: yes

Enable virtual network: no

Enable managed identity: no

Create Back Cancel

A ML-workspace - Microsoft Azure × Notebooks - Azure AI | Machine Learning Studio +

ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 📁 ⚡ ☆ 本人確認を行ってください

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Automated ML

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Monitoring

Data Labeling

Linked Services PREVIEW

Connections PREVIEW

The University of Tokyo > ML-workspace > Notebooks

Compute creation in progress... you can now see it in your list of computes.

## Notebooks

Files Samples

Users

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+ Files Terminal

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https://ml.azure.com/endpoints?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a...

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Compute - Azure AI | Machine Learning Studio

ml.azure.com/compute/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/workspaces/ML-workspace

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The University of Tokyo > ML-workspace > Compute

## Compute

The "Kubernetes clusters" tab is now where you can access previous versions of "inference clusters" (also known as "AKS clusters") and "attached Kubernetes" compute types along with any previously created compute targets using those types. [Learn more](#) about Kubernetes clusters.

Compute instances    Compute clusters    Kubernetes clusters    Attached computes    Serverless instances

Choose from a selection of CPU or GPU instances preconfigured with popular tools such as VS Code, JupyterLab, Jupyter, and RStudio, ML packages, deep learning frameworks, and GPU drivers. [Learn more about compute instances](#)

+ New    Refresh    Start    Stop    Restart    Schedule and idle shutdown    Delete    Reset view    View quota

Name	State	Idle shutdown	Applications	Size	Create
E4machine	Creating	--		STANDARD_E4DS_V4	Apr 8,

Search    Filter    Columns

Compute

Monitoring

Data Labeling

Linked Services PREVIEW

Connections PREVIEW

ML-workspace - Microsoft Azure × Compute - Azure AI | Machine L +

ml.azure.com/compute/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/wor... 📈 ⭐ 🎉 本人確認を行ってください

Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Compute

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Compute

The "Kubernetes clusters" tab is now where you can access previous versions of "inference clusters" (also known as "AKS clusters") and "attached Kubernetes" compute types along with any previously created compute targets using those types. [Learn more](#) about Kubernetes clusters.

Compute instances Compute clusters Kubernetes clusters Attached computes Serverless instances

Choose from a selection of CPU or GPU instances preconfigured with popular tools such as VS Code, JupyterLab, Jupyter, and RStudio, ML packages, deep learning frameworks, and GPU drivers. [Learn more about compute instances](#)

+ New Refresh Start Stop Restart Schedule and idle shutdown Delete Reset view View quota

Search Filter Columns

Name	State	Idle shutdown	Applications	Size	Created
E4machine	Running	1 hour	JupyterLab Jupyter VS Code (Web) ...	Standard_E4ds_v4	Apr 8,

Compute

3. Create a notebook

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The University of Tokyo > ML-workspace > Notebooks

Notebooks

Files Samples

Users 2573969490

Icon bar: 🔍 CSV + ⏪

Cloud icon: Laptop, Server, Database, plus sign

Notebooks is your space to add, browse, and edit files.

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In order to run notebooks and scripts, you must connect to an Azure Machine Learning compute resource. Once a notebook or terminal is connected, you can access all workspace assets including experiment details, data, models, and more. [Learn more](#)

+ Files Terminal

Create new file Create new folder More about the latest features

15 notifications

1 message

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ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 📁 ⚡ ⚡ 本人確認を行ってください

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Notebooks

Files Samples

Users 2573969490

File location

Users/2573969490 Edit location

File name \*

Untitled.ipynb

File type

Notebook (\*.ipynb)

Overwrite if already exists

This will replace any existing file with the same name

Create Cancel

to add, browse, and edit files.

Including Jupyter Notebooks (.ipynb). The files you

scripts, you must connect to an Azure Machine

Learning compute resource. Once a notebook or terminal is connected, you can

access all workspace assets including experiment details, data, models, and

more. [Learn more](#)

+ Files Terminal

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[Notebooks documentation](#)

15

1923306880-YamakataTraining

ML-workspace

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Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Notebooks

Notebooks

Files Samples

Untitled.ipynb

E4machine · Kernel launching Last saved a few seconds ago

Manage your sessions here

Session management has moved! Now you can come here to manage the active sessions running on your compute, which will optimize the performance of your terminal and notebooks.

All workspaces Home Model catalog Authoring Notebooks Automated ML Designer Prompt flow Assets Data Jobs Components Pipelines Environments Models Endpoints Manage Compute

A ML-workspace - Microsoft Azure Notebooks - Azure AI | Machine Learning Studio 未定義変数エラー対応

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Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Notebooks

Notebooks

Files Samples

Untitled.ipynb

E4machine · Kernel idle CPU 0% RAM 1% Last saved a minute ago Python 3.10 - SDK V2

Authenticate

All workspaces Home Model catalog Authoring Notebooks Automated ML Designer Prompt flow Assets Data Jobs Components Pipelines Environments Models Endpoints Compute

Write and run the code

1 print("test") <1 sec test

1 Untitled.ipynb

2 3 4 5 6 7 8 9 10 11 12 13 14 15

**How can I stop the billing?**

A ML-workspace - Microsoft Azure Notebooks - Azure AI | Machine Learning Studio + ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 2 15 ? 1923306880-YamakataTraining ML-workspace

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The University of Tokyo > ML-workspace > Notebooks

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Untitled.ipynb

Edit in VS Code Compute: E4machine - Running Python 3.10 - SDK v2 Authenticate

You need to be authenticated to the compute to use any Azure SDK. Please use the authenticate button to get authentication.

E4machine · Kernel idle CPU 0% RAM 1% Last saved

1 print("test") [4] <1 sec

... test

As long as it shows “Running,” you will be charged—whether it's actively processing or not!

As long as it shows “Running,” you will be charged—whether it's actively processing or not!

A Portal offline Notebooks - Azure AI | Machine Learning Studio ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 本人確認を行ってください

Azure AI | Machine Learning Studio The University of Tokyo > ML-workspace > Notebooks Untitled.ipynb Edit in VS Code Compute: E4machine - Stopped No kernel connected Viewing Last saved 12 minutes

All workspaces Home Model catalog Authoring Notebooks Automated ML Designer Prompt flow Assets Data Jobs Components Pipelines Environments Models Endpoints Manage Compute

If you don't use it for a certain amount of time, it will stop automatically and billing will also stop

A Portal offline Notebooks - Azure AI | Machine Learning Studio ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 本人確認を行ってください

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The University of Tokyo > ML-workspace > Notebooks Untitled.ipynb Edit in VS Code Compute: E4machine - Starting No kernel connected E4machine · Connecting Last saved 14 minutes ago

Files 1 print("test") [\*] Queued test

When you run any code cell, the status will change to "Starting," and then become "Running."

A ML-workspace - Microsoft Azure × Compute - Azure AI | Machine L + ml.azure.com/compute/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/wor... 本人確認を行ってください

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The University of Tokyo > ML-workspace > Compute

## Compute

The "Kubernetes clusters" tab is now where you can access previous versions of "inference clusters" (also known as "AKS clusters") and "attached Kubernetes" compute types along with any previously created compute targets using those types. [Learn more](#) about Kubernetes clusters.

**Compute instances** Compute clusters Kub... Serverless instances

Choose from a selection of CPU or GPU instances pre... [about compute instances](#)

+ New Refresh Start Stop Restart Schedule and idle shutdown Delete Reset view View quota

Search Filter Columns

Name	State	Idle shutdown	Applications	Size	Create
E4machine	Stopped	1 hour	JupyterLab Jupyter VS Code (Web) ...	Standard_E4ds_v4	Apr 8,

It can also be stopped manually.

[https://ml.azure.com/prompts/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/\(new\)ML-test/providers/Microsoft.MachineLearningServices/workspaces/ML-workspace&tid=f07baf4f-2b70-47d7-9a02-0875caf94c84](https://ml.azure.com/prompts/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/workspaces/ML-workspace&tid=f07baf4f-2b70-47d7-9a02-0875caf94c84)

A ML-workspace - Microsoft Azure × Compute - Azure AI | Machine L + ml.azure.com/compute/list?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/workspaces/ML-workspace&tid=f07baf4f-2b70-47d7-9a02-0875caf94c84

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## Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Compute

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**Compute instances** Compute clusters Kubern... Serverless instances

Choose from a selection of CPU or GPU instances pre... JupyterLab, Jupyter, and RStudio, ML packages, deep learning frameworks, and GPU drivers. [Learn more](#) about compute instances

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Name	State	Idle shutdown	Applications	Size	Create
E4machine	Stopped	1 hour	JupyterLab Jupyter VS Code (Web) ...	Standard_E4ds_v4	Apr 8,

If you want to change the time until shutdown

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Compute

ML-workspace - Microsoft Azure × E4machine - Azure AI | Machine Learning Studio + ml.azure.com/compute/E4machine/details?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearn... 📈 ⭐ 🚧 本人確認を行ってください 1923306880-YamakataTraining ML-workspace

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Authoring

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- Automated ML
- Designer
- Prompt flow

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The University of Tokyo > ML-workspace > Compute > E4machine

## E4machine ☆

Details Jobs Monitoring (preview)

Refresh Connect Start Stop Restart Delete Diagnose

**Resource properties**

Status: Stopped

Last operation: Stopped at Apr 8, 2025 5:55 PM: Succeeded

Virtual machine size: Standard\_E4ds\_v4 (4 cores, 32 GB RAM, 150 GB disk)

Processing unit: CPU - Memory optimized

Estimated cost: \$0.29/hr (when running)

Additional data storage: --

Applications: JupyterLab Jupyter VS Code (Web) VS Code (Desktop) Terminal Notebook

Created on: 2025/4/8 17:09:16

SSH access: Disabled

**Tags**

No tags

**Managed identity**

No managed identities

**Single sign-on details**

Single sign-on: Enabled

**Schedules**

**Idle shutdown schedule**

Shutdown after 1 hours of inactivity. Note: if you have prompt flow runtimes configured on this compute instance, idle shutdown will not occur.



A ML-workspace - Microsoft Azure x E4machine - Azure AI | Machine + ml.azure.com/compute/E4machine/details?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearn... 2 15 ? 1923306880-YamakataTraining ML-workspace

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The University of Tokyo > ML-workspace > Compute > E4machine

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Created on: 2025/4/8 17:09:16

SSH access: Disabled

Update E4machine schedule

Enable idle shutdown:  Shutdown after: 20 Minutes

Startup and shutdown schedule: Add schedule

For example, change to 20 minutes

Update Cancel

## 4. Use “VS Code”

A code editor made by Microsoft and loved by developers around the world.  
The official Azure documentation is available [here](#)

A ML-workspace - Microsoft Azure x Notebooks - Azure AI | Machine Learning Studio + ml.azure.com/fileexplorerAzNB?wsid=/subscriptions/a600356d-63a3-483e-b4bb-59629c01a212/resourcegroups/(new)ML-test/providers/Microsoft.MachineLearningServices/... 3 15 ? 1923306880-YamakataTraining ML-workspace

Azure AI | Machine Learning Studio

The University of Tokyo > ML-workspace > Notebooks

All workspaces Home Model catalog Authoring Notebooks Automated ML Designer Prompt flow Assets Data Jobs Components Pipelines Environments Models Endpoints Manage Compute

Untitled.ipynb x

Edit in VS Code Compute: E4machine - Running Python 3.10 - SDK v2

You need to be authenticated to Edit in VS Code (Web) Please use the authenticate button to get authenticated.

E4machine · Kernel busy Edit in VS Code (Desktop) Authenticate Last saved a few seconds ago Python 3.10 - SDK V2

1 print("test") [1] ✓ ... test

Authenticate

ML-workspace

本人確認を行ってください

vscode.dev/+ms-toolsai.vscode-ai-remote/+subscriptions+a600356d-63a3-483e-b4bb-59629c01a212+resourceGroups+(new)ML-test+providers+Microsoft.MachineLearnin...

Visual Studio Code (プレビュー)。いつでもどこでも、すべてをブラウザーで。 ドキュメントを読む プライバシーと Cookie 利用規約 VS Code をダウンロードする

code [Azure ML: E4machine]

Settings Untitled.ipynb

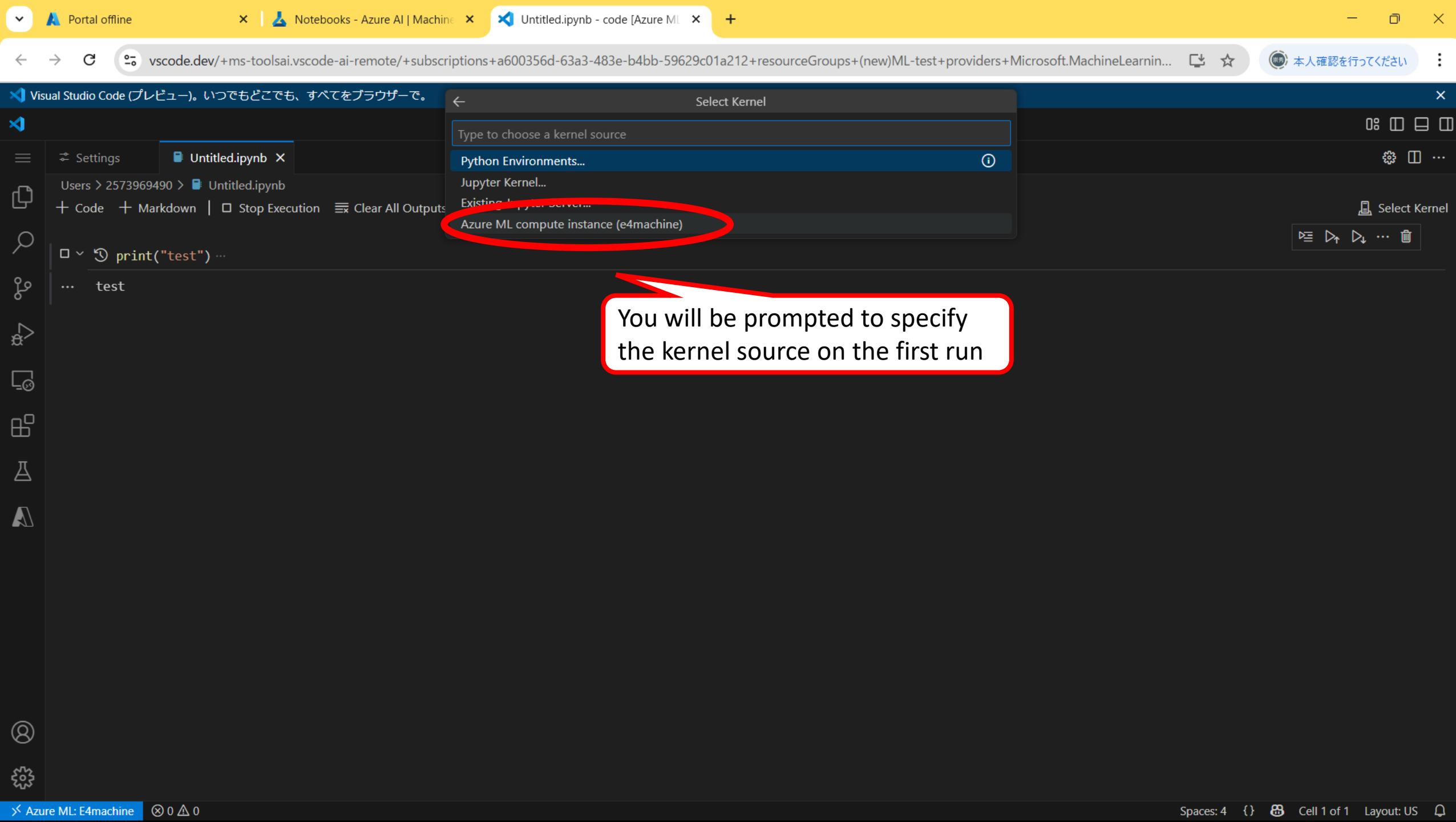
The extension 'Azure Machine Learning - Remote' wants to sign in using Microsoft.

Allow Cancel

Click "Allow" to open the authentication page, so select an account starting with the common ID

Waiting for Azure sign in...

Opening Remote... ⊗ 0 △ 0 Layout: US



A Portal offline

Notebooks - Azure AI | Machine

Untitled.ipynb - code [Azure ML]

vscode.dev/+ms-toolsai.vscode-ai-remote/+subscriptions+a600356d-63a3-483e-b4bb-59629c01a212+resourceGroups+(new)ML-test+providers+Microsoft.MachineLearnin... 本人確認を行ってください

Select a Kernel from e4machine

- ★ Python 3.10 - SDK v2 /anaconda/envs/azureml\_py310\_sdkv2/bin/python Recommended
- Python 3 (ipykernel) /anaconda/envs/jupyter\_env/bin/python Jupyter Kernel
- Python 3.8 - AzureML /anaconda/envs/azureml\_py38/bin/python
- Python 3.8 - Pytorch and Tensorflow /anaconda/envs/azureml\_py38\_PT\_TF/bin/python
- R /usr/lib/R/bin/R
- Python 3.10 - SDK v2 /anaconda/envs/azureml\_py310\_sdkv2/bin/python 2 mins ago, ... Jupyter Session

Choose to Azure ML

Visual Studio Code (プレビュー)。いつでもどこでも、すべてをブラウザーで。

Settings Untitled.ipynb

Users > 2573969490 > Untitled.ipynb

+ Code + Markdown | Stop Execution Clear All Outputs

print("test")

... test

Spaces: 4 Cell 1 of 1 Layout: US

Portal offline

Notebooks - Azure AI | Machine

Untitled.ipynb - code [Azure ML]

vscode.dev/+ms-toolsai.vscode-ai-remote/+subscriptions+a600356d-63a3-483e-b4bb-59629c01a212+resourceGroups+(new)ML-test+providers+Microsoft.MachineLearnin... 本人確認を行ってください

Select a Kernel from e4machine

- ★ Python 3.10 - SDK v2 /anaconda/envs/azureml\_py310\_sdkv2/bin/python Recommended
- Python 3 (ipykernel) /anaconda/envs/jupyter\_env/bin/python Jupyter Kernel
- Python 3.8 - AzureML /anaconda/envs/azureml\_py38/bin/python
- Python 3.8 - Pytorch and Tensorflow /anaconda/envs/azureml\_py38\_PT\_TF/bin/python
- R /usr/lib/R/bin/R
- Python 3.10 - SDK v2 /anaconda/envs/azureml\_py310\_sdkv2/bin/python 2 mins ago, ... Jupyter Session

Choose to Azure ML

Visual Studio Code (プレビュー)。いつでもどこでも、すべてをブラウザーで。

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print("test")

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Spaces: 4 Cell 1 of 1 Layout: US

A Portal offline | Notebooks - Azure AI | Machine | Untitled.ipynb - code [Azure ML] | +

vscode.dev/+ms-toolsai.vscode-ai-remote/+subscriptions+a600356d-63a3-483e-b4bb-59629c01a212+resourceGroups+(new)ML-test+providers+Microsoft.MachineLearnin... 本人確認を行ってください

Visual Studio Code (プレビュー)。いつでもどこでも、すべてをブラウザーで。 ドキュメントを読む プライバシーと Cookie 利用規約 VS Code をダウンロードする

code [Azure ML: E4machine]

Settings Untitled.ipynb

Users > 2573969490 > Untitled.ipynb

+ Code + Markdown | ▶ Run All ⚡ Restart Clear All Outputs | Jupyter Variables Outline ...

Python 3.8 - AzureML

num = 0  
for ii in range(10):  
 num += 1  
 print(num)  
 if num == 5:  
 print("STOP")

[4] ✓ 0.0s

Run the code

• Easy to use various software development platforms such as Github  
• A high-performance debugger is also available.  
• Various extensions