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- Part 4: Flow of Usage Fees
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 - Add an owner
 - 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'd like to develop using **Jupyter Notebook** as you would in **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.
- 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 descriptive paragraph about what workspaces are used for and a 'Learn more' link. On the right side, there are buttons for 'No grouping' and 'List view', along with sorting options 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": "1923306880-YamakataTraining", "resourceGroup": "ml-test", "storageAccount": "ml-test", "keyVault": "ml-test", "inboundAccess": "Allow", "outboundAccess": "Allow", "computeType": "Standard", "computeCount": 1, "computeSize": "Standard_DS2_v2", "computeRegion": "Tokyo", "computeLabel": "ml-test", "computeDescription": "ml-test", "computeTags": "ML-Test", "computeTagsList": [{"label": "ML-Test"}], "computeLabelList": [{"label": "ml-test"}], "computeDescriptionList": [{"label": "ml-test"}], "computeTagsList": [{"label": "ML-Test"}], "computeLabelList": [{"label": "ml-test"}], "computeDescriptionList": [{"label": "ml-test"}]}

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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

Resource details

Every workspace must be assigned to an Azure subscription, which is where billing happens. You use resource groups like folders to organize and manage resources, including the workspace you're about to create.

[Learn more about Azure resource groups](#)

Subscription * ① 1923306880-YamakataTraining

Resource group * ① Create new

Workspace details

Configure your basic workspace settings like Name, Region, and Storage account.

Name * ① (new)ML-test

Region * ①

Storage account * ① Create new

Key vault * ①

Review + create < Previous Next : Inbound Access

A resource group is a container that holds related resources for an Azure solution.
[Learn more](#)

Name * (new)ML-test

OK Cancel

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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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

A Azure Machine Learning - Micro + - X

portal.azure.com/#view/Microsoft_Azure_MLTeamAccounts/CreateMachineLearningServicesBladeV2/_provisioningContext~/%7B"initialValues"%3A%7B"subscriptionId": "80000000-0000-0000-0000-000000000000", "resourceGroup": "mlteam", "location": "Tokyo", "name": "mlteam", "description": "mlteam", "tags": {}, "outboundAccess": "All networks", "inboundAccess": "Disabled", "encryption": "None", "identity": "None", "subnet": null, "privateDnsZone": null}

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Home > Azure Machine Learning >

Azure Machine Learning

Create a machine learning workspace

Basics **Inbound Access** **Outbound Access** (highlighted with a red oval) Encryption Identity Tags Review + create

Public network access allows access to this resource through the internet using a public IP address. An application or resource that is granted access with the following network rules still requires proper authorization to access this resource. [Learn more ↗](#)

Public network access *

Disabled

All networks

i All networks, including the internet, can access this resource.

Workspace Inbound access

Name	Subscription	Resource group	Region	Subnet	Private DNS Zone
Click on add to create a private endpoint					
+ Add					

[Review + create](#) < Previous Next : Outbound 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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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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Deployment

 X <<

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ 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.

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ML-workspace

Azure Machine Learning workspace

 Search

▽ <<

 Download config.json

 Delete

Storage

[mlworkspace5877508646](#)

Provisioning State

Succeeded

Application Insights

[mlworkspace8039569950](#)

MLflow tracking URI

<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** in Azure Machine Learning because it's the environment where your code runs.
It provides the processing power needed to train models, run notebooks, and execute experiments.

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The University of Tokyo > ML-workspace > Notebooks

Notebooks

Files Samples

Users 2573969490

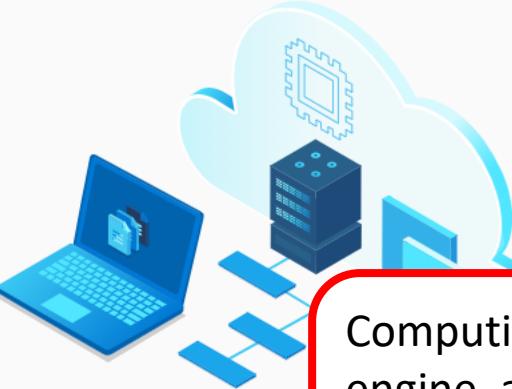
Computing' refers to the underlying engine, also known as the kernel, that executes your code and processes your tasks

Notebooks is your space to add, edit, and run code. You can add files of any type, including Jupyter Notebooks, Python scripts, and R scripts. These files are stored in the workspace file share, and are accessible from anywhere 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](#)

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View Release Notes to learn more about the latest features
Notebooks documentation



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Azure AI | Machine Learning Studio

15

1923306880-YamakataTraining

ML-workspace

Create compute instance

Required settings

Scheduling optional

Security optional

Applications optional

Tags optional

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

Compare the prices and specifications, and choose the one that best fits your needs.

Review + Create

Back

Next

Cancel

Price (example)

- Prices vary depending on the region (Japan is expensive)
- Is Japan safe 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

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Create compute instance

Required settings

Scheduling (optional)

Security (optional)

Applications (optional)

Tags (optional)

Review (6)

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 (button circled in red)

Back

Cancel

1923306880-YamakataTraining

ML-workspace

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Azure AI | Machine Learning Studio

Authoring

Notebooks

Automated ML

Designer

Prompt flow

Assets

Data

Jobs

Components

Pipelines

Environments

Models

Endpoints

Compute

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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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

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The University of Tokyo > ML-workspace > Compute

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Manage

Compute

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Compute instances Compute clusters Kubernetes clusters Attached computes Serverless instances

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+ 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.

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 Terminal

Create new file Create new folder More about the latest features

15 notifications

1 message

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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

View Azure Machine Learning tutorials

View Release Notes to learn more about the latest features ↗

Notebooks documentation ↗

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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

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

Notebooks

Files Samples

Untitled.ipynb

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

Authenticate

Untitled.ipynb

1 print("test")

<1 sec

... test

Write and run the code

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

Edit in VS Code Compute: E4m... Pyth... Authenticate

1 2 15

ML-workspace

How to set the idle timeout
before shutdown

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/... 2 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 Authenticate

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

E4machine · Kernel idle CPU 0% RAM 1% Last saved a few minutes ago

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

... test

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

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

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E4machine · Kernel idle CPU 0% RAM 1% Last saved a few minutes ago

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

... test

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

All workspaces Home Model catalog

Authoring Notebooks Automated ML Designer Prompt flow

Assets Data Jobs Components Pipelines Environments Models Endpoints

Manage Compute

Edit in VS Code Compute: E4machine - Stopped Last saved 12 minutes

Viewing

If you don't use it for a certain amount of time, it will stop without permission
→ Billing will also stop

The screenshot shows the Azure Machine Learning Studio interface. On the left, there's a sidebar with sections for Authoring (Notebooks, Automated ML, Designer, Prompt flow), Assets (Data, Jobs, Components, Pipelines, Environments, Models, Endpoints), and Manage (Compute). The main area displays a notebook titled 'Untitled.ipynb' under 'ML-workspace'. The notebook contains a single cell with the code 'print("test")'. A red arrow points from the text 'If you don't use it for a certain amount of time, it will stop without permission → Billing will also stop' to the 'Stopped' status indicator in the top navigation bar. The status bar also shows 'Last saved 12 minutes'.

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

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/workspaces/ML-workspace&tid=f07baf4f-2b70-47d7-9a02-0875caf94c84

本人確認を行ってください

Azure AI | Machine Learning Studio

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 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

+ 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,

If you want to change the time until shutdown

It can also be stopped manually.

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

Azure AI | Machine Learning Studio

Authoring

- Notebooks
- Automated ML
- Designer
- Prompt flow

Assets

- Data
- Jobs
- Components
- Pipelines
- Environments
- Models
- Endpoints

Manage

- Compute
- Monitoring
- Data Labeling
- Linked Services PREVIEW
- Connections PREVIEW

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

Azure AI | Machine Learning Studio

Authoring

- Notebooks
- Automated ML
- Designer
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Manage

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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

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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

Update E4machine schedule

Enable idle shutdown: Shutdown after: 20 Minutes

Startup and shutdown schedule: Add schedule

For example, change to 20 minutes

Update Cancel

The screenshot shows the Azure AI | Machine Learning Studio interface. On the left, there's a sidebar with categories like Authoring, Assets, and Manage. The main area shows details for an 'E4machine' instance, including its status as 'Stopped', last operation time, virtual machine size, processing unit, estimated cost, and additional data storage. Below that is a list of applications (JupyterLab, Jupyter, etc.) and creation details. On the right, a modal window titled 'Update E4machine schedule' is open. It has a toggle for 'Enable idle shutdown' which is turned on. Under 'Shutdown after', the value '20' is selected from a dropdown menu next to a 'Minutes' unit indicator. A red circle highlights this entire section. Below it is a 'Startup and shutdown schedule' section with a 'Add schedule' button. At the bottom of the modal are 'Update' and 'Cancel' buttons, with the 'Update' button also circled in red. A callout bubble with the text 'For example, change to 20 minutes' points to the 'Shutdown after' field.

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. Authenticate

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

1 print("test") [1] ✓ ... test

Authenticate

ML-workspace

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

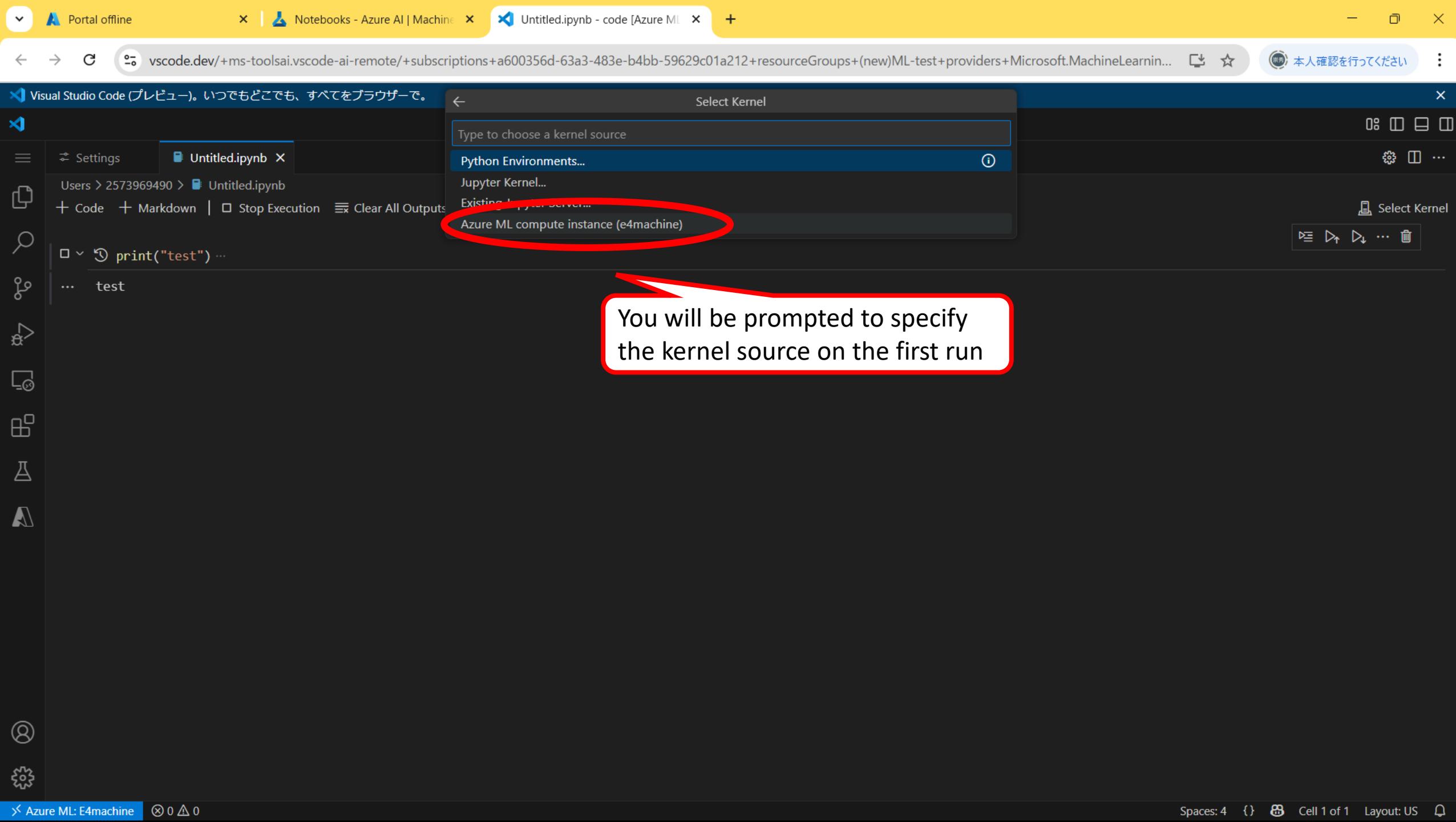
The extension 'Azure Machine Learning - Remote' wants to sign in using Microsoft.

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

Select Kernel

print("test")

... test

Choose to Azure ML

Azure ML: E4machine

Spaces: 4

Cell 1 of 1

Layout: US

0 △ 0

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

1
2
3
4
5

- Integration with software development platforms such as Github
- A high-performance debugger is also available.
- Various extensions

Azure ML: E4machine ⏪ 0 △ 0 Spaces: 4 LF {} Cell 1 of 1 Layout: US