

AZURE ML

Microsoft Azure

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Shellunext_1693422264...
UNEXT (NPUNEXT.ONMICROSO...

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Azure Machine Learning

Create a machine learning workspace

Validation passed

BasicsNetworkingEncryptionIdentityTagsReview + create

Basics

Subscription

npunext-1673505322675

Resource group

Resource1priya

Region

East US

Name

PriyadarsiniDemo

Storage account

(new) priyadarsinide4064344573

Key vault

(new) priyadarsinide7262686469

Application insights

(new) priyadarsinide0153214280

Container registry

None

Networking

Connectivity method

Enable public access from all networks

Network isolation

Public

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Microsoft.MachineLearningServices | Overview

Deployment

SearchDeleteCancelRedeployDownloadRefresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.MachineLearningSer...

Start time : 10/4/2023, 10:17:44 AM

Subscription : npunext-1673505322675

Correlation ID : cba03af9-4e1e-4b31-acac-251...

Resource group : Resource1priya

> Deployment details

< Next steps

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03B - Training Models

01 - Get Started with

11 - Tune Hyperpar

Edit in VS Code

Compute

Serv...

Language: PySpark (Python)

Session not started

Configure session

Users

Shellunext_1693422264319

01 - Get Started with Notebo

03B - Training Models.ipynb

04 - Run Experiments.ipynb

05 - Train Models.ipynb

06 - Work with Data.ipynb

11 - Tune Hyperparameters (

11 - Tune Hyperparameters.i

Get Started with Notebooks in Azure Machine Learning

Azure Machine Learning is a cloud-based service for creating and managing machine learning solutions. It's designed to help data scientists and machine learning engineers leverage their existing data processing and model development skills and frameworks, and scale their workloads to the cloud.

A lot of data science and machine learning work is accomplished in notebooks like this one. Notebooks consist of *cells*, some of which (like the one containing this text) are used for notes, graphics, and other content usually written using *markdown*; while others (like the cell below this one) contain code that you can run interactively within the notebook.

The Azure Machine Learning Python SDK

You can run pretty much any Python code in a notebook, provided the required Python packages are installed in the environment where you're running it. In this case, you're running the notebook in a *Conda* environment on an Azure Machine Learning compute instance. This environment is installed in the compute instance by default, and contains common Python packages that data scientists typically work with. It also includes the Azure Machine Learning Python SDK, which is a Python package that enables you to write code that uses resources in your Azure Machine Learning workspace.

Azure AI | Machine Learning Studio

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Linked Services

Unext > PriyadarsiniDemo > Compute

Compute

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

Compute instances

Compute clusters

Kubernetes clusters

Attached computes

Create a single or multi node compute cluster for your training, batch inferencing or reinforcement learning workloads. [Learn more about compute clusters](#)

Alternatively, you can now run a training job without having to create and manage compute by using serverless. [Learn more here](#)

+ New

Refresh

Delete

View options

View quota

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Filter

Columns

Name	State	Size	Location	Created on	Ac
AZUREMLPMS	Succeeded (0 nodes)	STANDARD_DS3_V2	eastus	Oct 4, 2023 12:08 PM	

Compute "AZUREMLPMS" provisioning succeeded

[Compute details](#)

Filter by title

Documentation for keys, secrets, and certificates

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Azure Databricks

Access Azure Blob Storage using Azure Databricks and Azure Key Vault

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Create a storage account and blob container with Azure CLI

You'll need to create a general-purpose storage account first to use blobs. If you don't have a [resource group](#), create one before running the command. The following command creates and display the metadata of the storage container. Copy down the ID.

Azure CLI

Copy

```
az storage account create --name contosoblobstorage5 --resource-group contosoResourceGroup --location eastus --sku Standard_LRS --encryption-services blob
```

```
{
  "accountName": "contosoblobstorage5",
  "accountType": "Storage",
  "kind": "Storage",
  "location": "eastus",
  "primaryEndpoints": {
    "blob": "https://contosoblobstorage5.blob.core.windows.net/",
    "queue": "https://contosoblobstorage5.queue.core.windows.net/",
    "table": "https://contosoblobstorage5.table.core.windows.net/",
    "web": "https://contosoblobstorage5.web.core.windows.net/"
  },
  "primaryKeys": {
    "key1": "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  },
  "secondaryKeys": {
    "key2": "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  },
  "encryption": {
    "services": {
      "blob": {
        "enabled": true,
        "keySource": "Microsoft.Storage",
        "keyVaultProperties": null
      }
    }
  },
  "status": "Creating",
  "tags": null,
  "timeCreated": "2020-06-15T21:40:12.280871+00:00"
}
```

Additional resources

Training

Module

Implement Azure Key Vault - Training

Learn how Azure Key Vault can help you keep your apps more secure, and how to set and retrieve secrets by using the...

Documentation

Mounting cloud object storage on Azure Databricks - Azure Databricks

Learn how to view, create, and manage tables and databases in Azure Databricks.

Secret scopes - Azure Databricks

Learn how to create and manage both types of secret scope for Azure Databricks, Azure Key Vault-backed and...

Connect to Azure Data Lake Storage Gen2 and Blob Storage - Azure Databricks

Learn how to configure Azure Databricks to use the ABFS driver to read and write data stored on Azure Data Lake Storage...

ML model lifecycle

```

graph LR
    Data[(Data)] --> Train[Train model]
    Train --> Deploy[Deploy model]
    Deploy --> Monitor[Monitor]
    Monitor --> Analyze[Analyze performance & retrain model]
    Analyze --> UpdatedData[(Updated data)]
    UpdatedData --> Train
  
```

The diagram illustrates the ML model lifecycle as a continuous loop. It begins with a cylinder labeled 'Data', which feeds into a box labeled 'Train model'. From 'Train model', the flow goes to 'Deploy model', then to 'Monitor'. From 'Monitor', the flow goes to 'Analyze performance & retrain model', which then leads to 'Updated data' (represented by a cylinder). Finally, 'Updated data' feeds back into the 'Train model' box, completing the cycle.