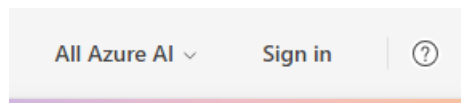


# Lab Guide

## AI Studio Copilot

### Accessing Microsoft Azure

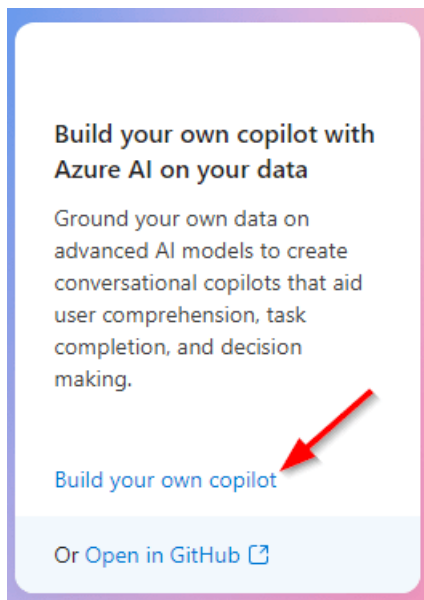
Launch another Chrome tab on your desktop and navigate to the below URL. Click **Sign in** in the upper right-hand corner. Your Azure Credentials are available by clicking the **Cloud** icon at the top of the Lab Player.



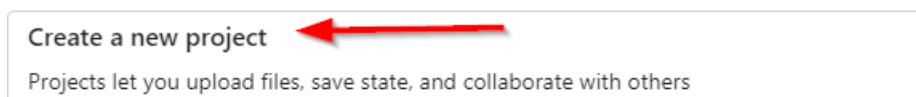
`https://ai.azure.com/`

### Create a new project

1. Click **Build your own copilot** to create the project.



2. Click on **Create a new project** and click **Select**



3. In the **Product details** popup change the **Project name** but leave the pre-generated characters at the end.

### Project details

Project name \* ⓘ

democopilot-c-9304

Hub ⓘ

[Create a new hub](#)

Select or search by name



There is no hub associated with your Azure subscription. You will be prompted to create a new hub on the next page.

Projects using the same hub share security settings, and can share artifacts like data connections. [Learn more](#) ⓘ

4. In the **Hub** section click on the text **Create a new hub**

Hub ⓘ

 [Create a new hub](#)

Select or search by name



There is no hub associated with your Azure subscription. You will be prompted to create a new hub on the next page.

Projects using the same hub share security settings, and can share artifacts like data connections. [Learn more](#) ⓘ

5. In the replacement popup change the **Hub Name** default to include your name. Leave the pre-generated characters at the end.
  - **Subscription:** Make sure your subscription is set
  - **Resource group:** Can be an existing or select the text to
  - **Create a new resource group**
  - **Location:** Set to East US
  - **Connect Azure AI Services or Azure OpenAI:** leave default
  - **Connect Azure AI Search:** leave default
  - Click **Next**

Create a project

Project details

Create a hub

Model deployment

Review and finish

Create a hub for your projects

A hub is the collaboration environment for your team to share your project work, model endpoints, compute, (data) connections, and security settings. [Learn more](#)

Do you need to customize security or the [dependent resources](#) of your hub? [Go to Azure Portal](#)

Hub name \*

democopilot-c\_ai

Subscription \* ⓘ

Pay-As-You-Go

Create new subscription

Resource group \*

(new) democopilot

Create new resource group

Location \*

East US

Help me choose

Connect Azure AI Services or Azure OpenAI \* ⓘ

(new) ai-democopilot-c\_ai

Create new AI Services

Connect Azure AI Search

Skip connecting

Create new AI Search

Back

Next

Create a project

Cancel

6. In the Deploy a model to use the chat playground step leave the defaults. Then click **Next**

Create a project

Project details

Create a hub

Model deployment

Review and finish

Deploy a model to use the chat playground

An Azure OpenAI model deployment is required for building a copilot with your own custom data. If you also want to use your own data, the model you deploy in your project must support custom data. [Learn more about supported models](#)

Chat model \* ⓘ

gpt-35-turbo - version 0301

If you want your model to be indexed, you'll also need to add a model that supports embeddings.

Text embeddings model ⓘ

text-embedding-ada-002 - version 2

☐ Skip model deployment for now and go to playground

Back

Next

Create a project

Cancel

7. In the final step click on **Create a project**

### Create a project

✓ Project details

✓ Create a hub

✓ Model deployment

4 Review and finish

#### Review and finish

The following resources will be created for you, along with required dependencies. The creation of the first hub and project may take a few minutes to complete. [Learn more about hubs and dependencies](#).

**Hub**

Name: democopilot-c\_ai  
Subscription: Pay-As-You-Go  
Resource group: democopilot  
Location: eastus

**Project**

Name: democopilot-c-9304  
Subscription: Pay-As-You-Go  
Resource group: democopilot

**AI Services**

Name: ai-democopilot-c\_ai

**Azure OpenAI models**

Chat model: gpt-35-turbo - version 0301  
Text embeddings model: text-embedding-ada-002 - version 2

Back

Create a project

Cancel

8. In the **Review and finish** step watch all the services get spun up. Wait for green circles on each resource.

### Create a project

✓ Project details

✓ Create a hub

✓ Model deployment

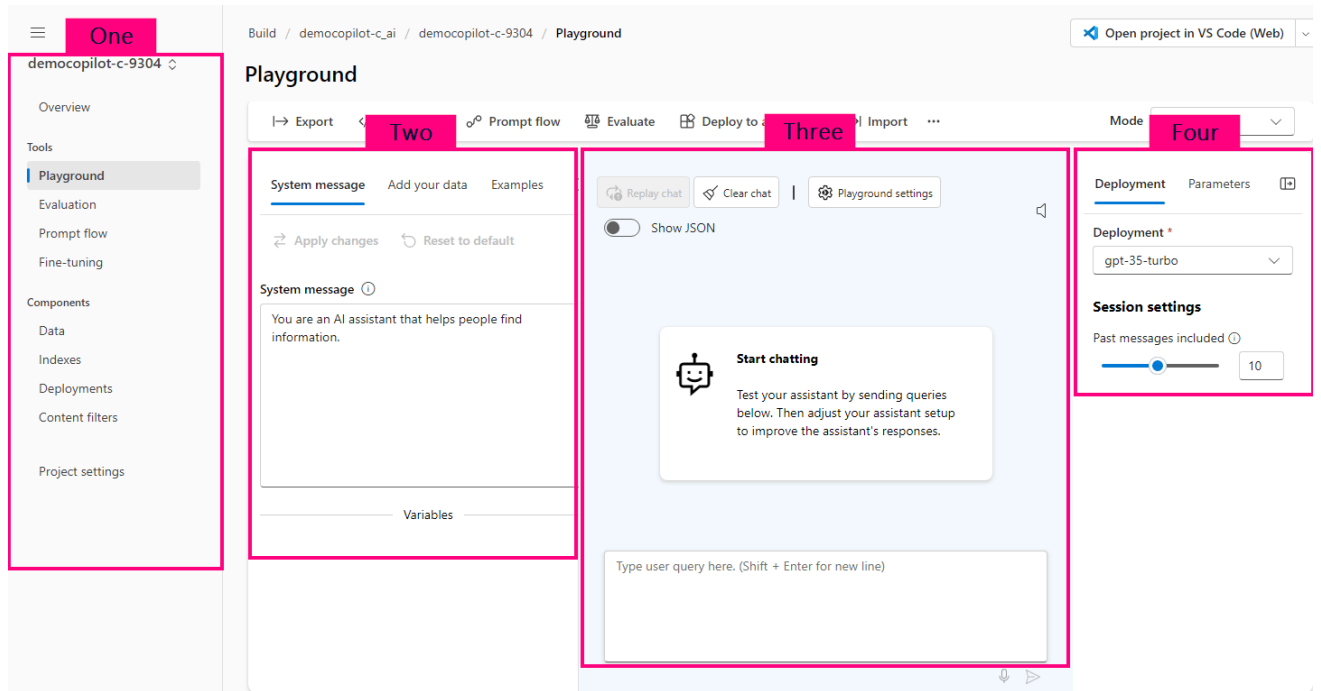
4 Review and finish

#### Review and finish

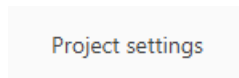
The following resources will be created for you, along with required dependencies. The creation of the first hub and project may take a few minutes to complete. [Learn more about hubs and dependencies](#).

Resource	Type
🕒 democopilot-c-9304	AI project ⓘ
🕒 democopilot-c_ai	AI hub ⓘ
🕒 ai-democopilot-c_ai	AI Services ⓘ
🕒 stdemocopilo	Storage account ⓘ
🕒 kv-democopi	Key vault ⓘ
🕒 democopilot-c_ai/endpoints/gpt-35-turbo	AI Services endpoint ⓘ
🕒 democopilot-c_ai/endpoints/text-embedding-ada-002	AI Services endpoint ⓘ

9. After the deployment is completed you will be redirected to the **Playground**. Make sure you change the width of the browser to ensure you see four different columns.



10. In the left-hand navigation click on **Project settings**



11. In the **Project settings** you can view the following:

- **Connected resources**
- **Project properties**
- **Computes**
- **Project members**
- **Prompt flow runtimes**
- **Total cost**


## Settings

**Connected resources** 4 [View all →](#)

Name	Type
<a href="#">ai-democopilotcai467206846101</a>	AI Services
<a href="#">ai-democopilotcai467206846101_aiai</a>	Azure OpenAI
<a href="#">democopilot-c-9304/workspaceblobstore</a>	Azure Blob Storage
<a href="#">democopilot-c-9304/workspaceartifactstore</a>	Azure Blob Storage

+ New connection

**Computes** 0 [View all →](#)



No computes to display

**Project properties** [Manage in the Azure Portal](#)

<b>Name</b>	democopilot-c-9304
<b>Location</b>	eastus
<b>Hub</b>	<a href="#">democopilot-c_ai</a>
<b>Subscription</b>	<a href="#">Pay-As-You-Go</a>
<b>Subscription ID</b>	<a href="#">b59e0ced-b410-46d5-bbbf-f14c748f4132</a>
<b>Resource Group</b>	<a href="#">democopilot</a>

[Get API endpoints](#)  
[View subscription quota](#)

Delete project

**Project members** 2 [View all →](#)

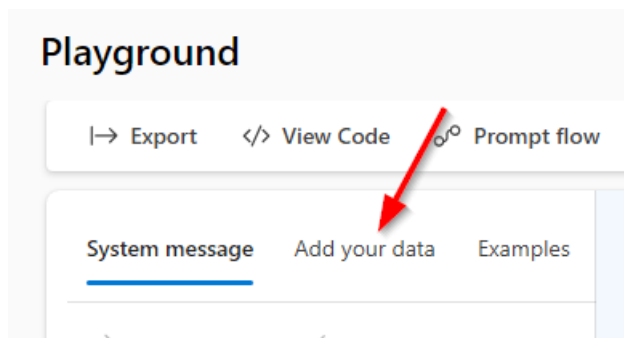
BN

brian nielsen (You)

Owner

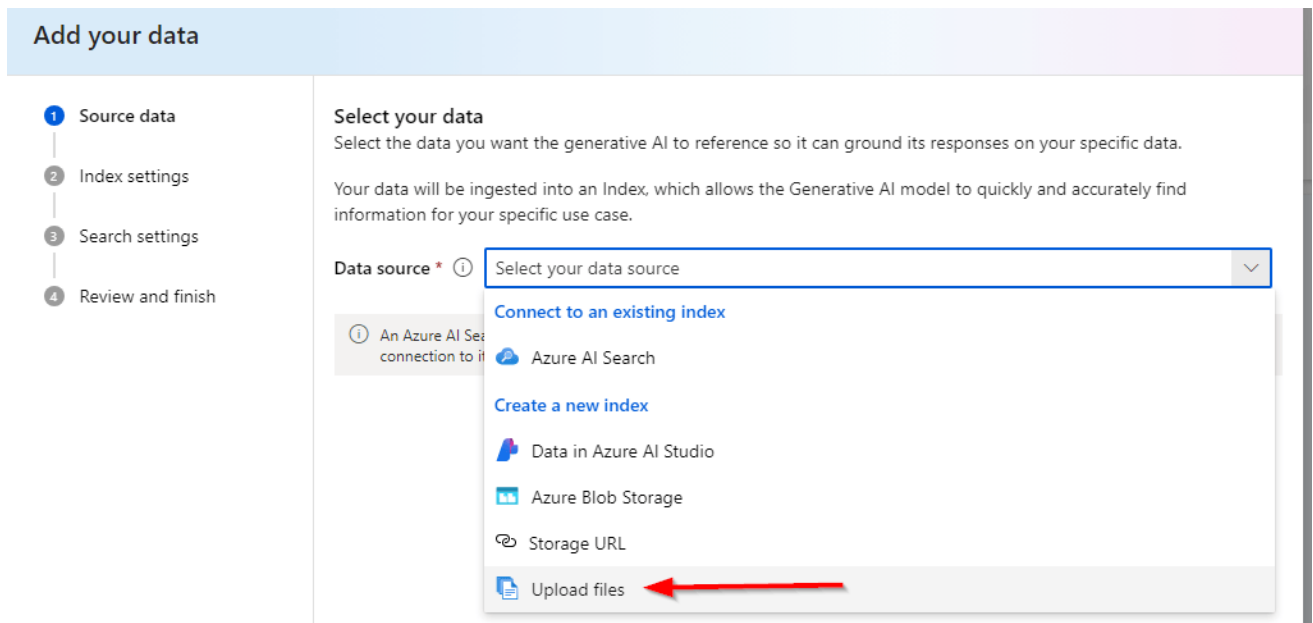
12. Click back on the **Playground**

13. Click on the **Add your data** tab. Then click the **Add a new data source**

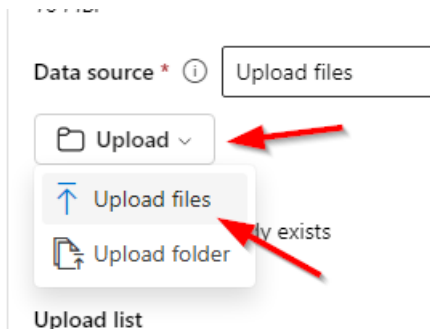


14. Download these files to upload. Please **extract** first. <https://tinyurl.com/yz5tucbk>

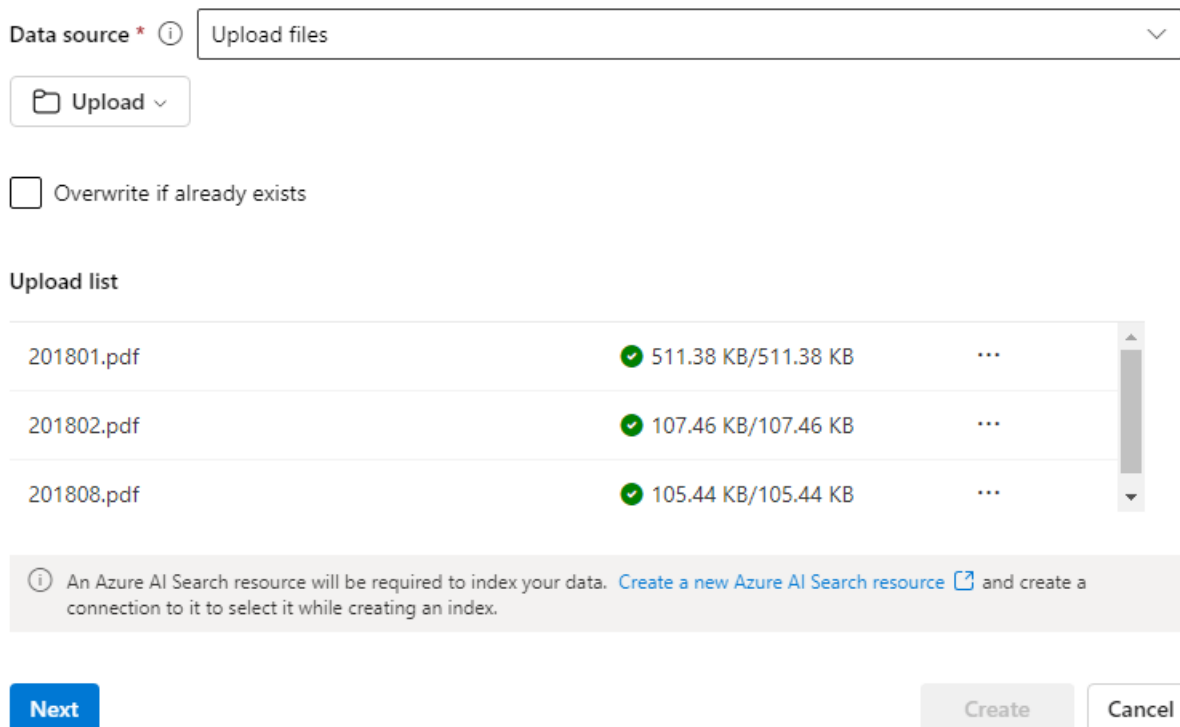
15. From the **Data source** dropdown select **Upload files**



16. The interface updates and click the **Upload** button and choose **Upload files**



17. Once the three files are uploaded your screen should resemble the following. Then click **Next**



18. We need to create a **Search service** so click the text that says **Create a new Azure AI Search resource**. This opens a new tab.

### Index settings

Configure your index

#### Index storage \*

Azure AI Search

#### Select Azure AI Search service \* ⓘ

Select Azure AI Search service

[Create a new Azure AI Search resource](#) 

#### Index name \* ⓘ

19. Make sure to choose the same **Resource group**, **Location** as the other services you previously created. Also change the **Pricing tier** option to **Basic**. Then click **Review + create**. And finally **Create**

## Create a search service ...

**Basics** Scale Networking Tags Review + create

### Project details

#### Subscription \*

Pay-As-You-Go

#### Resource Group \*

democopilot

[Create new](#)

### Instance Details

#### Service name \* ⓘ

Enter service name

#### Location \*

East US

#### Pricing tier \* ⓘ

**Basic**

15 GB/Partition, max 3 replicas, max 3 partitions, max 9 search units

[Change Pricing Tier](#)

20. Once you get confirmation that the deployment is complete switch back to the previous tab. It takes a while before it is available in the dropdown.



## ✓ Your deployment is complete



Deployment name : search-service-mysearchv222

Subscription : Pay-As-You-Go

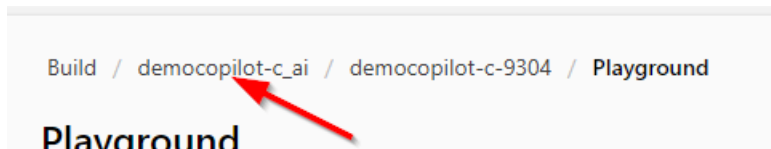
Resource group : democopilot

> Deployment details

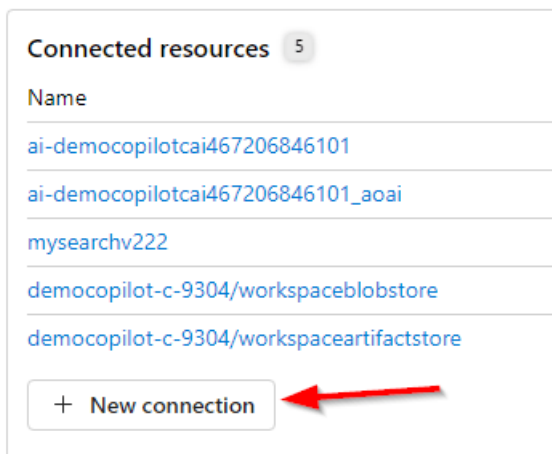
✓ Next steps

Go to resource

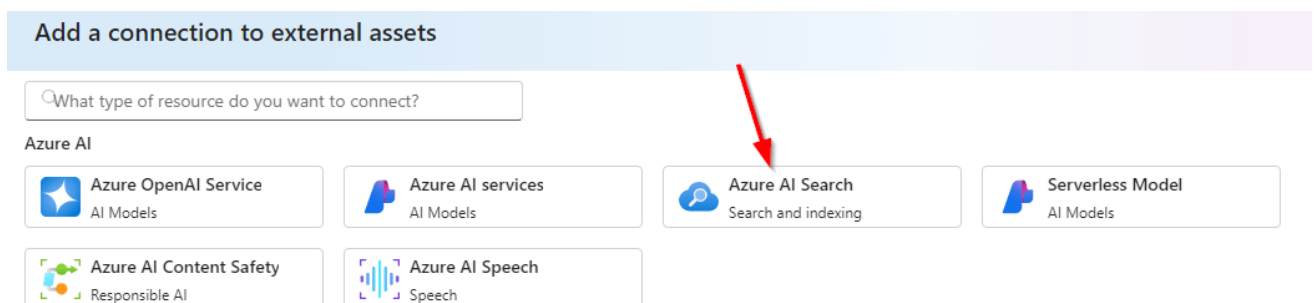
21. In the breadcrumbs click the link after the **Build** link to get to the properties page



22. In the **Connected resources** section click on the + **New connection**



23. In the popup select **Azure AI Search**



24. Select the newly created **Search service** by clicking the **Add connection** button. Then click **Close**

### Connect an Azure AI Search resource

← Back to select an asset type

☒ Browse resources ☐ Enter manually

Search for a resource

Displaying (1) resources

Name	Resource group
mysearchv222	democopilot

Location: eastus  
Sku: basic  
Subscription: Pay-As-You-Go  
Semantic search: disabled

**Add connection**

Authentication: API key

ⓘ Your hub will be granted access to this resource. Anyone with access to your project or hub will be able to use this resource.

25. Return to the project listed under the **Projects** section

## Overview

**Projects** 1

Project

[democopilot-c-9304](#)

+ New project

26. Then click back on **Playground**.

**Note:** The next steps not a mistake. Just follow as written....

1. Click on the **Add your data** tab. Then click the **Add a new data source**

### Playground

Export View Code Prompt flow

System message **Add your data** Examples

2. From the **Data source** dropdown select **Upload files**

Add your data

1 Source data

2 Index settings

3 Search settings

4 Review and finish

Select your data

Select the data you want the generative AI to reference so it can ground its responses on your specific data.

Your data will be ingested into an Index, which allows the Generative AI model to quickly and accurately find information for your specific use case.

Data source \* ⓘ

Select your data source

Connect to an existing index

Azure AI Search

Create a new index

Data in Azure AI Studio

Azure Blob Storage

Storage URL

Upload files

- The interface updates and click the **Upload** button and choose **Upload files**

Data source \* ⓘ

Upload files

Upload

Upload files

Upload folder

Upload list

- Once the three files are uploaded your screen should resemble the following. Then click **Next**

Data source \* ⓘ

Upload files

Upload

☐ Overwrite if already exists

Upload list

201801.pdf	✓ 511.38 KB/511.38 KB	...
201802.pdf	✓ 107.46 KB/107.46 KB	...
201808.pdf	✓ 105.44 KB/105.44 KB	...

ⓘ

An Azure AI Search resource will be required to index your data. [Create a new Azure AI Search resource](#) and create a connection to it to select it while creating an index.

Next

Create

Cancel

5. Select the **Search service** you connected earlier from the dropdown. Leave the default **Index name** and click **Next**

The screenshot shows the 'Add your data' wizard at the 'Index settings' step. On the left, a progress bar shows four steps: 'Source data' (completed with a green check), 'Index settings' (current step, highlighted with a blue circle and '2'), 'Search settings' (step 3), and 'Review and finish' (step 4). The main content area is titled 'Index settings' with the subtitle 'Configure your index'. Under 'Index storage \*', 'Azure AI Search' is selected. Below that, 'Select Azure AI Search service \*' is followed by a dropdown menu. The dropdown is open, showing 'Select Azure AI Search service' at the top and 'mysearchv222' as the selected option, which is highlighted with a mouse cursor.

6. Click the dropdown for the **Azure OpenAI resource** and choose the one previously created then click **Next**

The screenshot shows the 'Add your data' wizard at the 'Search settings' step. The progress bar on the left now shows 'Source data' and 'Index settings' as completed (green checks), 'Search settings' as the current step (blue circle and '3'), and 'Review and finish' as step 4. The main content area is titled 'Configure search settings' with a detailed paragraph about vector search. Under 'Vector settings', the checkbox 'Add vector search to this search resource' is checked. Below that, 'Azure OpenAI resource \*' is followed by a dropdown menu. The dropdown is open, showing 'Select Azure OpenAI resource' at the top and 'ai-democopilotcai467206846101\_aiai AzureOpenAI' as the selected option. A red arrow points to the dropdown arrow icon on the right side of the menu.

7. On the final step of the wizard click **Create**. This will take a while.

### Add your data

✓ Source data

✓ Index settings

✓ Search settings

4 Review and finish

#### Review and finish

Review the configurations you set for your index

**Index name**  
coral-key-ts263rp5hs

**Index storage**  
Azure AI Search

**Azure AI Search connection**  
mysearchv222

**Include vector settings**  
Yes

**Embedding model connection**  
ai-democopilotcai467206846101\_aoai

**Schedule**  
OneTime

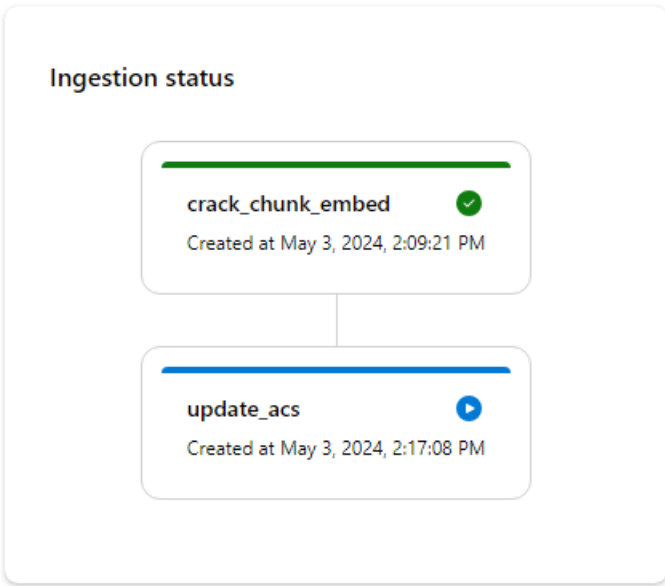
**Compute**  
Serverless compute (Auto select)

Back


Create

Cancel

8. You will see several progression steps



9. When the process is created it will resemble the following:


System message   **Add your data**   Examples   

---

Gain insights into your own data source. Your data is stored securely in your Azure subscription. [Learn more about how your data is protected](#)


---

**Index:**  
[coral-key-ts263rp5hs](#)

**Search type:**  
Hybrid (vector + keyword) ▾ [Learn more about different search types](#) 

[Advanced settings](#) >


---

 Remove data source

10. Change the Search type dropdown to **Keyword**

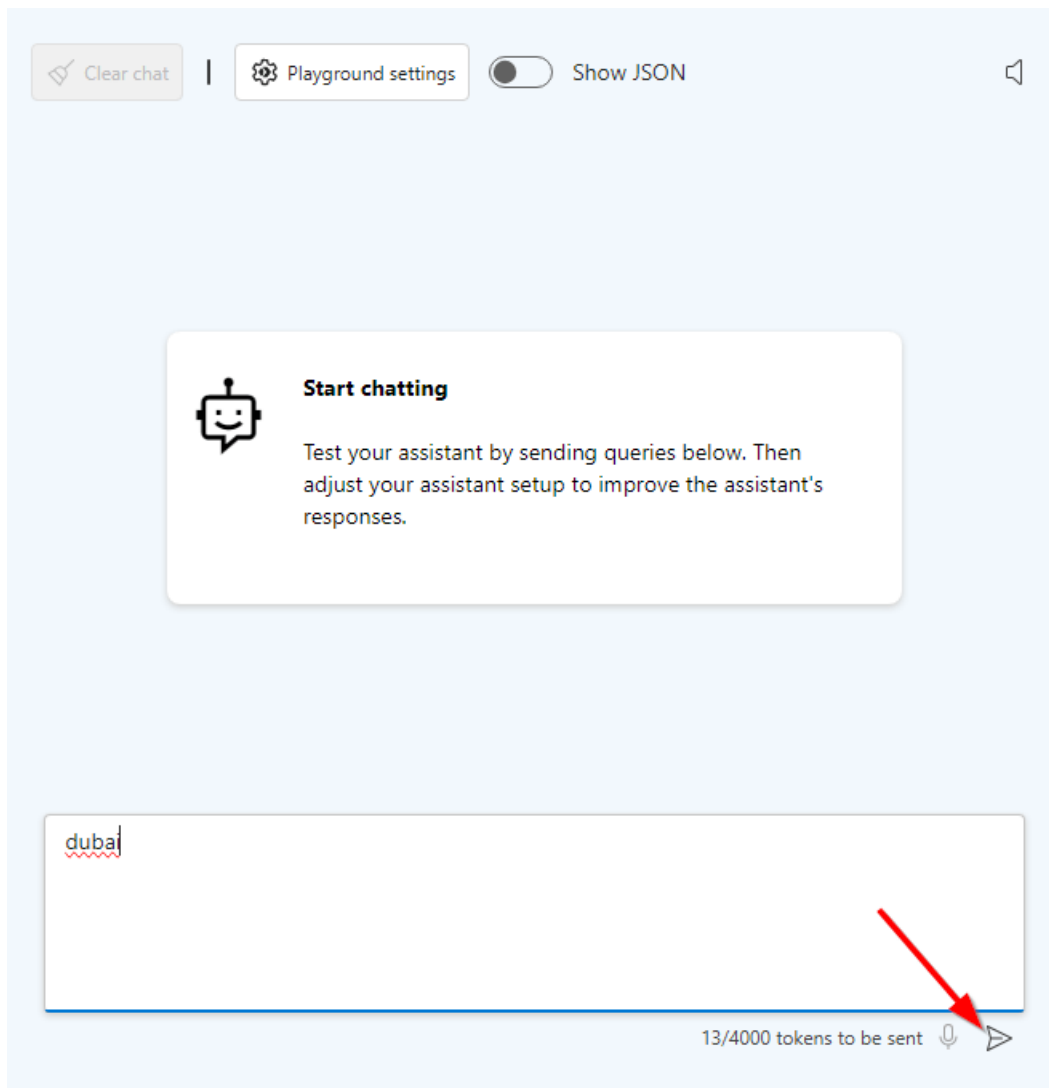
**Index:**  
[coral-key-ts263rp5hs](#)

**Search type:**  
Keyword ▾ [Learn](#)

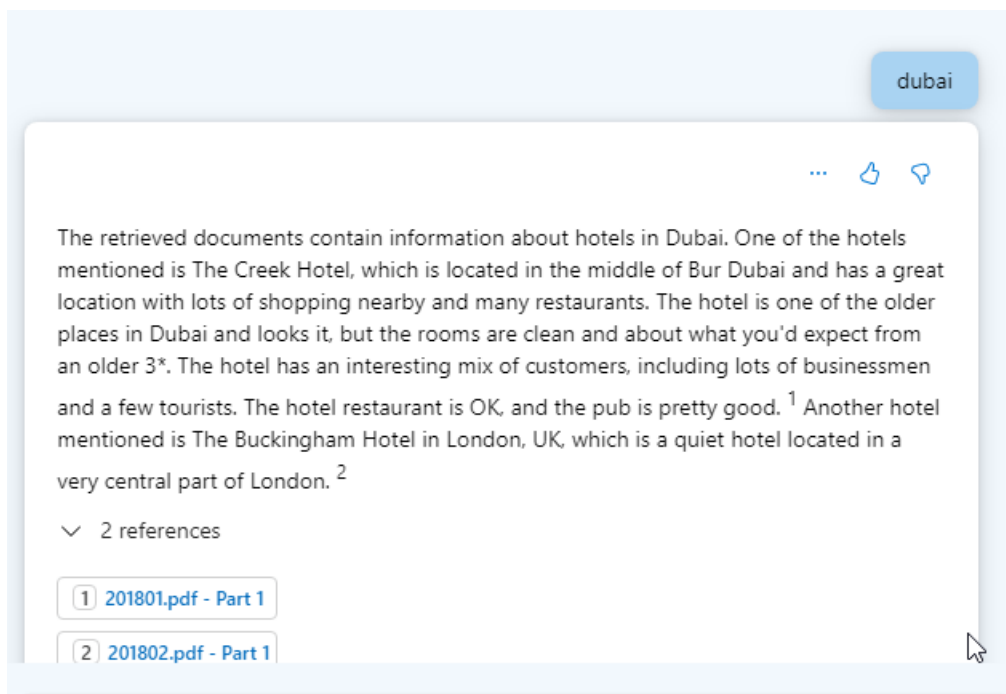
[search types](#) 

[Advanced settings](#) >

11. Search for the word **dubai** and click the **Submit** button





12. The results...



13. Click on Prompt flow

## Playground

→ Export </> View Code  Prompt flow 


14. Accept the defaults and click **Open**

### Orchestrate and customize this setup with prompt flow

Your playground setup will be exported to prompt flow, ending this playground session. Any index that was created here can be found in Indexes.

Storage location \* 

Users/bnielsen-c/promptflow

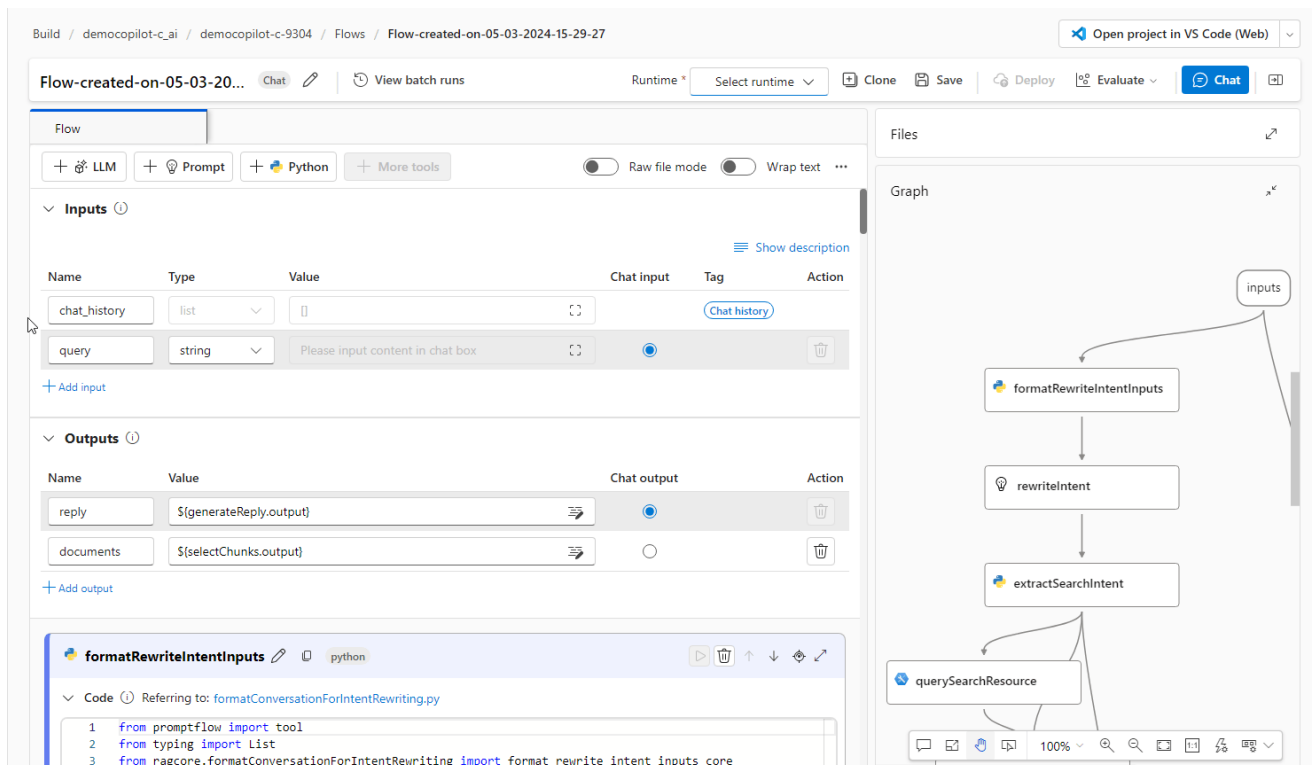
Folder name \* 

Flow-created-on-05-03-2024-15-29-27

Open

Cancel

15. Flow output

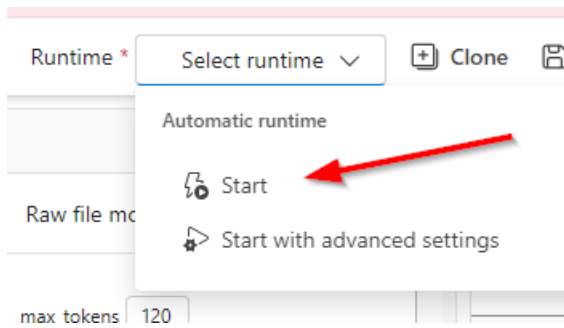


The screenshot displays the Prompt Flow interface for a flow named "Flow-created-on-05-03-2024-15-29-27". The interface includes a top bar with navigation options like "Build", "democopilot-c\_ai", "democopilot-c-9304", "Flows", and "Flow-created-on-05-03-2024-15-29-27". Below this, there's a section for "Flow" with tabs for "Inputs", "Outputs", and "Code". The "Inputs" section shows a table with columns "Name", "Type", "Value", "Chat input", "Tag", and "Action". It lists "chat\_history" (list) and "query" (string). The "Outputs" section shows a table with columns "Name", "Value", "Chat output", and "Action", listing "reply" and "documents". The "Code" section shows a Python script snippet. On the right, the "Graph" section displays a flow diagram with nodes: "inputs", "formatRewriteIntentInputs", "rewriteIntent", "extractSearchIntent", and "querySearchResource".

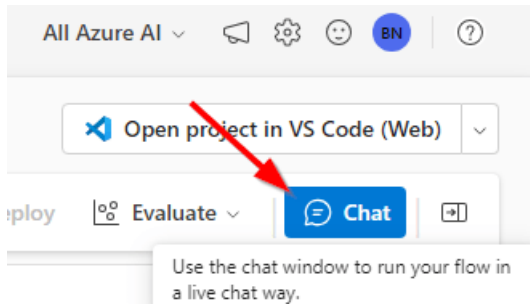
16. In the **Runtime** section choose the dropdown and click **Start**. Give it some time to spinup a runtime. It



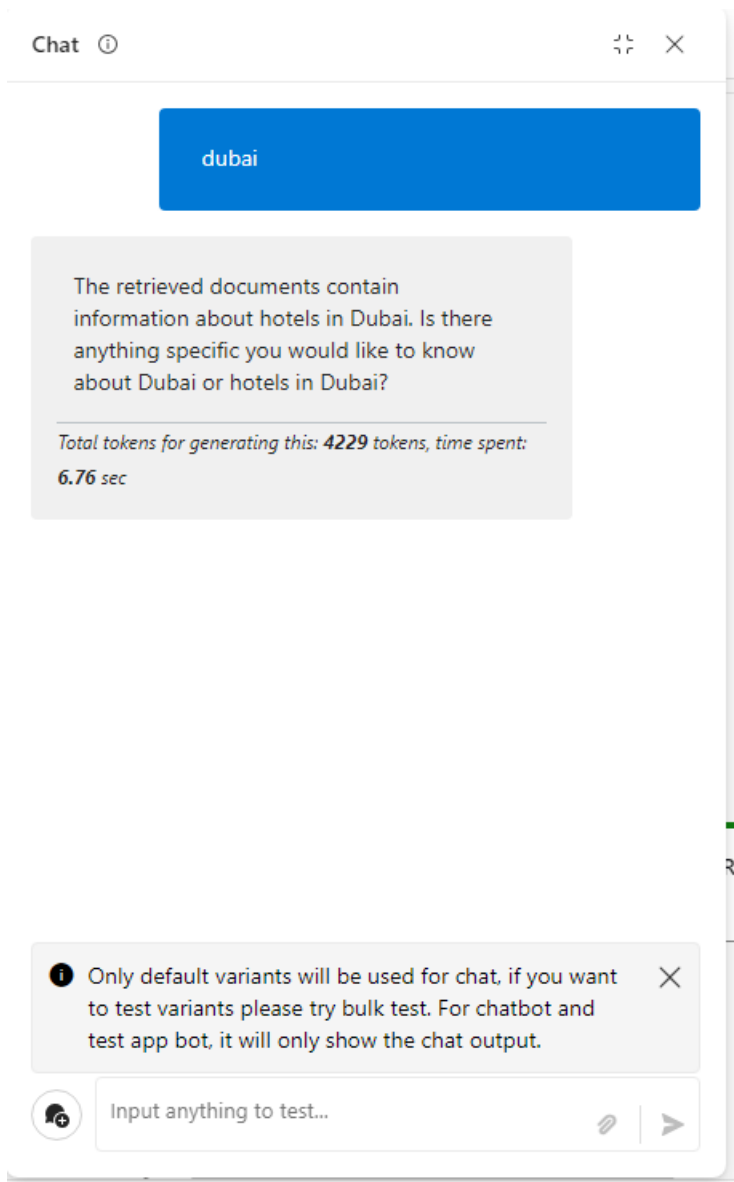
will keep spinning until it is ready.



17. In the upper right-hand corner click on the **Chat** button



18. Search for **dubai** again and review the results



19. Lets try a real prompt **are there any good hotels in Dubai?**

20. CONGRATULATIONS!!!

You are finished with this exercise. No need to delete anything at this point.