

Agentic AI using IBM Cloud

Step1: Open IBM Cloud login page with this link cloud.ibm.com, enter your Gmail and click on Continue

The screenshot shows the IBM Cloud login interface. At the top, there's a navigation bar with 'IBM Cloud', 'Catalog', 'Cost estimator', and 'Docs'. Below it is a weather icon showing a sun and clouds. The main area has a light gray background with a large blue sidebar on the right featuring various icons related to cloud computing and security. A red box highlights the 'Email' input field, and a blue box highlights the 'Continue' button.

Log in to IBM Cloud
Don't have an account? [Create an account](#)

Sign in with

IBMid

Continue →

[Forgot ID?](#) Remember ID

Enter your Gmail here.

Step2: Enter your password click on login.

The screenshot shows the IBM login interface. At the top, there's a header with 'IBM'. Below it is a decorative graphic of a grid with purple dots and abstract shapes. The main form has a white background. A red box highlights the 'Password' input field, and a blue box highlights the 'Log in' button.

Log in to IBM

Password
 ⚡

Logging in as [aswinikumar.m@phulad07-14@gmail.com](#) Not you?

Log in →

[Forgot password?](#)

Step3: IBM Cloud Dashboard.

The screenshot shows the IBM Cloud Dashboard. At the top, there's a navigation bar with 'IBM Cloud', a search bar, and account information for 'Aswini Kum...'. Below the navigation bar is a sidebar with icons for dashboard, catalog, management, and user profile. The main area is titled 'Dashboard' and contains several service cards:

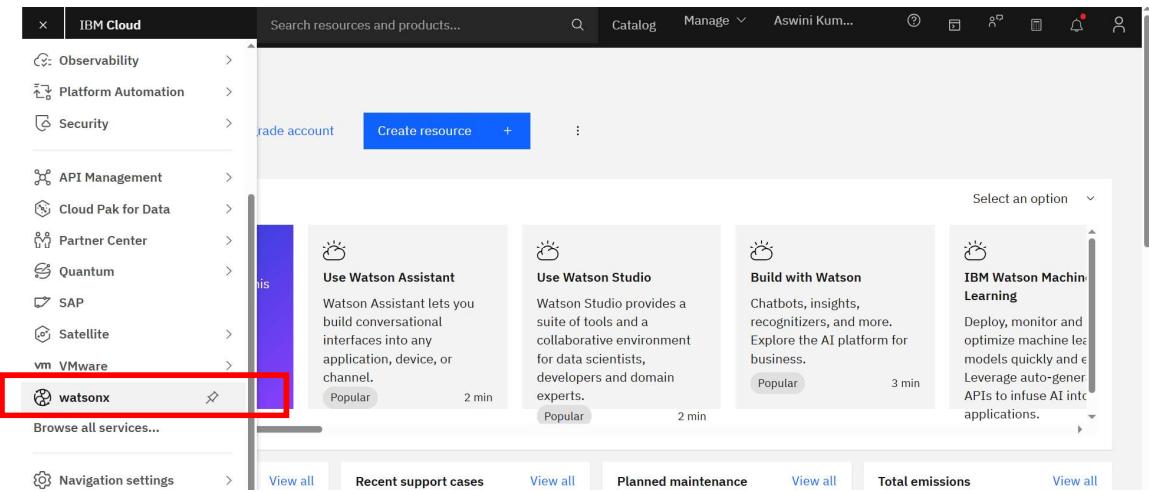
- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services.
- Use Watson Assistant**: Watson Assistant lets you build conversational interfaces into any application, device, or channel.
- Use Watson Studio**: Watson Studio provides a suite of tools and a collaborative environment for data scientists, developers and domain experts.
- Build with Watson**: Chatbots, insights, recognizers, and more. Explore the AI platform for business.
- IBM Watson Machine Learning**: Deploy, monitor and optimize machine learning models quickly and easily. Leverage auto-generated APIs to infuse AI into your applications.

Below the cards are links for 'IBM Cloud status', 'Recent support cases', 'Planned maintenance', and 'Total emissions'.

Step4: Go to Navigation Menu

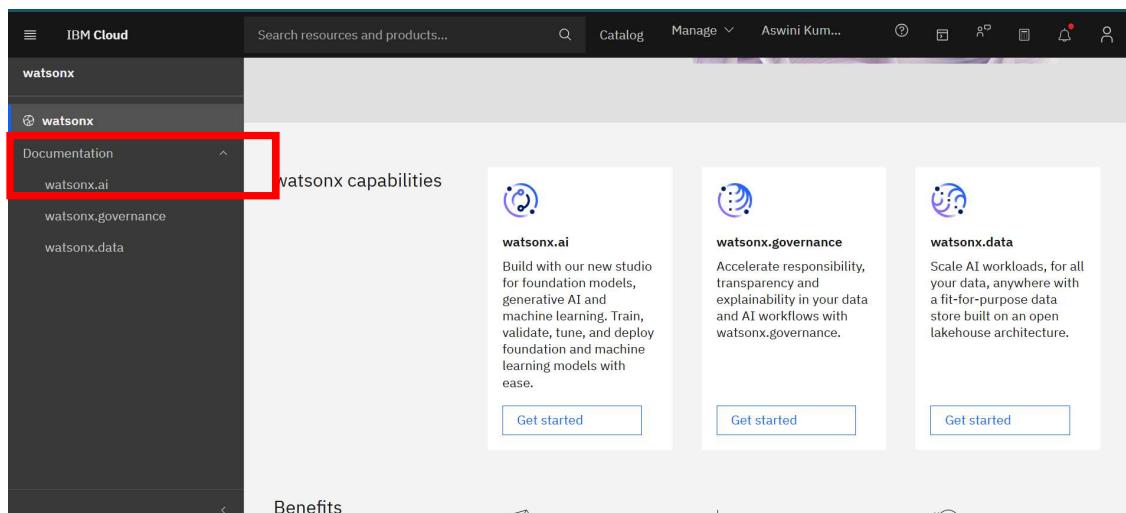
This screenshot is identical to the one above, showing the IBM Cloud Dashboard. However, the 'Navigation Menu' button in the top-left corner of the sidebar is highlighted with a red box to indicate it should be clicked to access the navigation menu.

Step5: Choose Watsonx.



The screenshot shows the IBM Cloud dashboard. On the left, a sidebar lists various services: Observability, Platform Automation, Security, API Management, Cloud Pak for Data, Partner Center, Quantum, SAP, Satellite, VMware, and Watsonx. The 'Watsonx' item is highlighted with a red box. The main content area displays several AI-related services: Use Watson Assistant, Use Watson Studio, Build with Watson, and IBM Watson Machine Learning. A dropdown menu labeled 'Select an option' is open over the Watsonx service entry.

Step6: This is the interface, now click on Watsonx.ai. (from Documentation tab)



The screenshot shows the Watsonx documentation page. The left sidebar has a single item: 'Documentation'. Under 'Documentation', there is a sub-item 'watsonx.ai', which is highlighted with a red box. The main content area is titled 'watsonx capabilities' and contains three sections: 'watsonx.ai', 'watsonx.governance', and 'watsonx.data', each with a 'Get started' button.

Step7: Choose AI agents.

The screenshot shows the IBM Watsonx homepage. On the left is a navigation sidebar with sections like Overview, Planning a generative AI solution, Getting started and tutorials, Gen AI solutions, Preparing data, Data science solutions, Deploying AI, Governing AI, Administration, and Glossary. The main content area has a search bar at the top. Below it, there's a brief introduction about Watsonx as a Service. Underneath is a grid of cards: 'Developer Hub' (with a right-pointing arrow), 'Foundation models' (with a right-pointing arrow), and 'AI agents' (which is highlighted with a red box). At the bottom of the grid are links for 'What's new', 'Quick start tutorials', and 'AI risk atlas'. A blue circular arrow icon is located to the right of the 'AI risk atlas' link.

Step8: Scroll down a little, then click on Agentic Lab and click on Watsonx.ai homepage

The screenshot shows the 'Agent Lab (beta)' page under the 'Gen AI solutions' section of the navigation. The sidebar includes sections like Overview, Planning a generative AI solution, Getting started and tutorials, Gen AI solutions (which is expanded to show Terms of use, Tokens, Supported models, Building prompts, Tuning models, Agent Lab (beta) [highlighted with a red box], and Coding generative AI solutions), and Development resources. The main content area starts with an 'Overview' section. Below it, a paragraph discusses Agentic applications and their function calling mechanism. A link to 'Agent Lab.' is present, also highlighted with a red box. A blue circular arrow icon is located to the right of the 'Agent Lab.' link.

The screenshot shows the IBM WatsonX Agent Lab (beta) interface. The left sidebar has a navigation menu with sections like Overview, Planning a generative AI solution, Getting started and tutorials, Gen AI solutions (selected), Terms of use, Tokens, Supported models, Building prompts, Tuning models, Agent Lab (beta) (selected), Coding generative AI solutions, and Retrieval-augmented generation. The main content area has a title 'Build an agent with Agent Lab: IBM WatsonX' and instructions: 'To build an AI agent, complete the following steps:' followed by a numbered list from 1 to 5. Step 1 is highlighted with a red box around 'watsonx.ai home page'. A note at the bottom states: 'Note: Currently, watsonx.ai offers LangGraph as the only framework choice.' A blue arrow icon is on the right.

WatsonX Home

Build an AI agent with Agent Lab: IBM WatsonX

To build an AI agent, complete the following steps:

- From the [watsonx.ai home page](#), choose a project, and then click the **New asset > Build an AI agent to automate tasks** tile.
- Select a foundation model and optionally update model parameters. For details, see [Foundation model configuration](#).
- To set up your agent, specify a name for the agent and describe the tasks the agent performs.
- Optional:* Select an icon and background image to customize how your agent appears in the **Agent Preview** pane.
- Select the AI agent framework you want to use to create, deploy and, manage your agent.

Note: Currently, watsonx.ai offers LangGraph as the only framework choice.

Step9: This is next interface, now scroll down this page, create sandbox

The screenshot shows the WatsonX AI Model Governance interface. It features a 'Welcome back, [redacted]' message at the top. Below it is a 'Default to open tasks in' dropdown. A central panel has a 'Start chatting...' input field and an 'Open Prompt Lab' button. To the right are two cards: 'Build an AI agent to automate tasks with Agent Lab' and 'Tune a foundation model with labeled data with Tuning Studio'. A 'Customize my journey' dropdown is on the left. A tooltip over the 'Build an AI agent' card says: 'Once you create a sandbox project or migrate projects, you will be able to open a task directly in your project and start working.' A 'Collapse' button is at the bottom right.

Welcome back, [redacted]

Default to open tasks in

Train, deploy, validate, and govern AI models responsibly.

Customize my journey

[...]

Once you create a sandbox project or migrate projects, you will be able to open a task directly in your project and start working.

Start chatting...

Open Prompt Lab

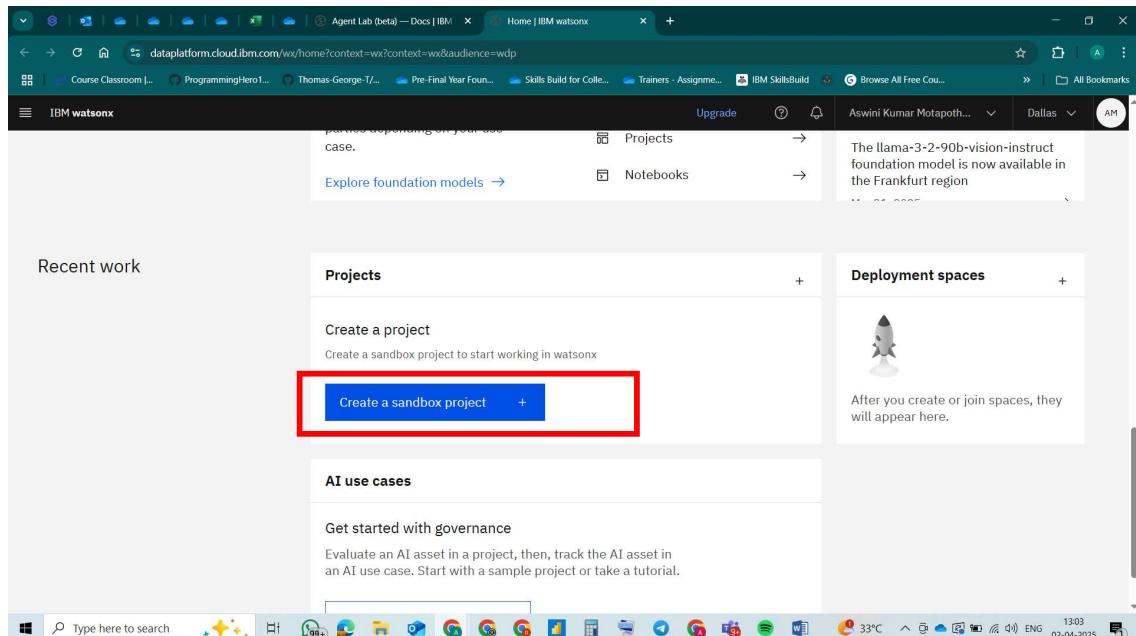
AI

Build an AI agent to automate tasks with Agent Lab

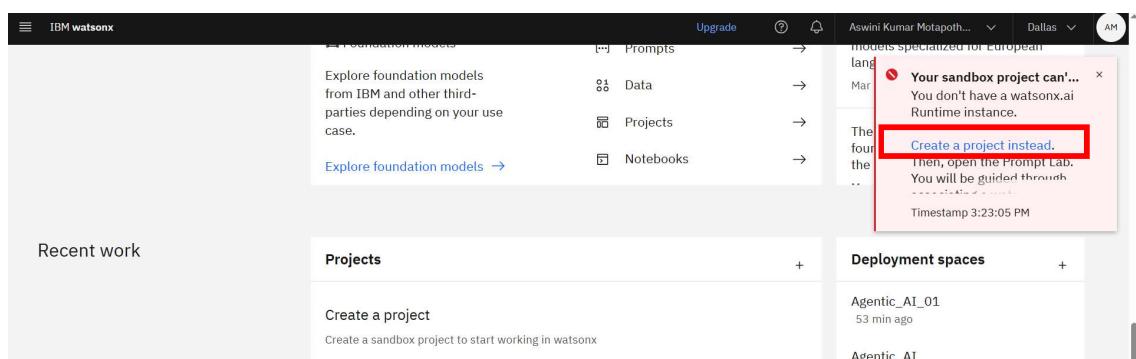
Tune a foundation model with labeled data with Tuning Studio

Collapse ^

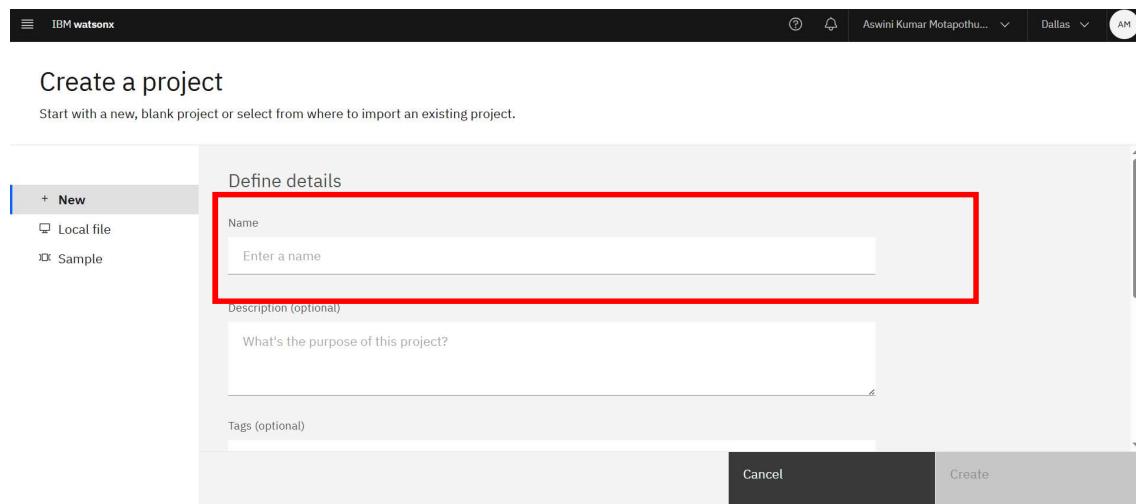
Step10: Now click on Create a sandbox project.



Step11: Click on Create project instead.



Step12: Enter your project name and scroll down.



Step13: Click on Add.

IBM Watsonx

Create a project

Start with a new, blank project or select from where to import an existing project.

+ New

Local file

Sample

Add tags

Add tags to make projects easier to find. To add tags, separate them with commas and press Enter.

Define storage

① Select storage service

Add

Refresh.

② Refresh

Project includes integration with Cloud Object Storage for storing project assets.

Cancel Create

Step14: Choose second plan, which is free plan, click on Create.

Pricing plan
Displayed prices do not include tax. Monthly prices shown are for country or region: United States

Plan	Features	Pricing
One Rate	One Rate plan offers a flat monthly charge that includes capacity, and built-in allowances for outbound bandwidth and data access. It is best suited for active workloads with large amounts of outbound bandwidth as a percent of their storage capacity.	
Lite(deprecated)	Lite plan instance is free to use for Storage capacity up to 25 GB per month. Lite plan instance is used for trial, and can be easily upgraded to Standard plan for unlimited scalability and full functionality. None Lite plan services are deleted after 30 days of inactivity.	Free

Summary
Cloud Object Storage
Region: Global
Plan: Lite(deprecated)
Service name: Cloud Object Storage-pp
Resource group: Default

Create View terms Cancel

Step15: click on Refresh, click on Create.

Create a project
Start with a new, blank project or select from where to import an existing project.

+ New
Local file
Sample

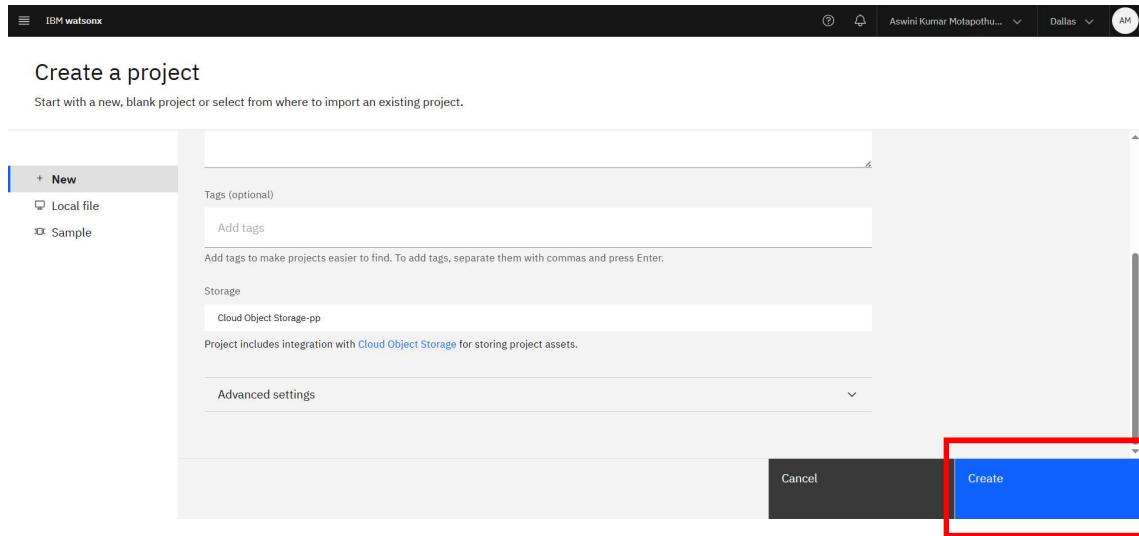
Add tags
Add tags to make projects easier to find. To add tags, separate them with commas and press Enter.

Define storage
① Select storage service
Add
Add an object storage instance, and then return to this page and click Refresh.
② Refresh

Project includes integration with Cloud Object Storage for storing project assets.

Advanced settings

Cancel Create



Step16: This page opened. (Don't do any here)

Start working

Add users as collaborators →

Add data to work with →

Chat and build prompts with foundation models →

Tune a foundation model with labeled data →

View all

Jump back in By all

Assets that you create with tools show here. See all assets, including data assets, on the Assets page.

View all

Resource usage

For this month in this project

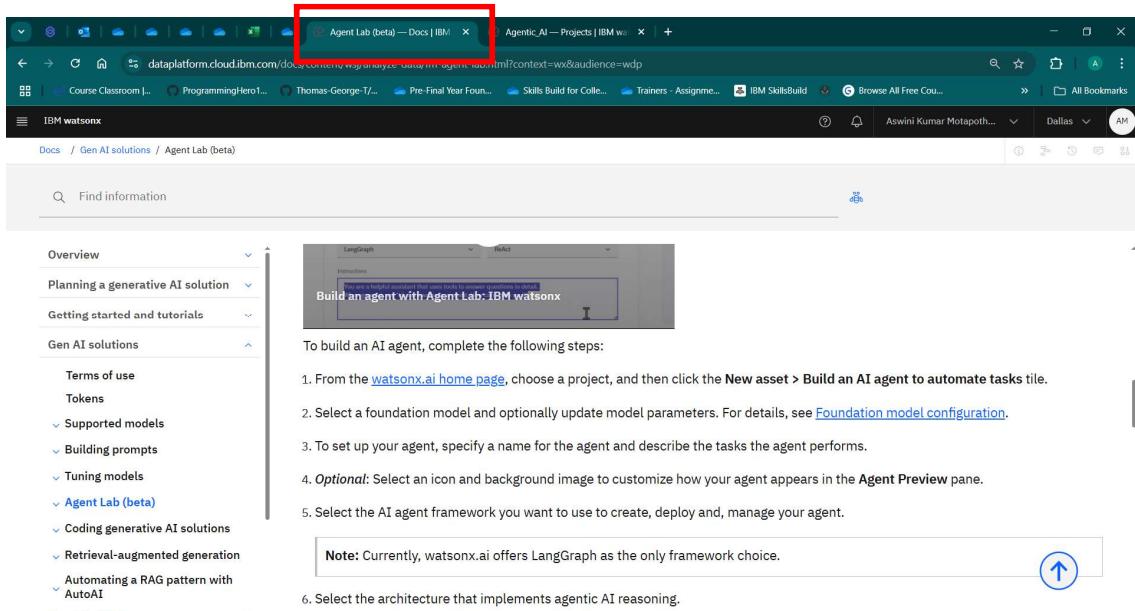
0 CUH

0 Tokens

Project history

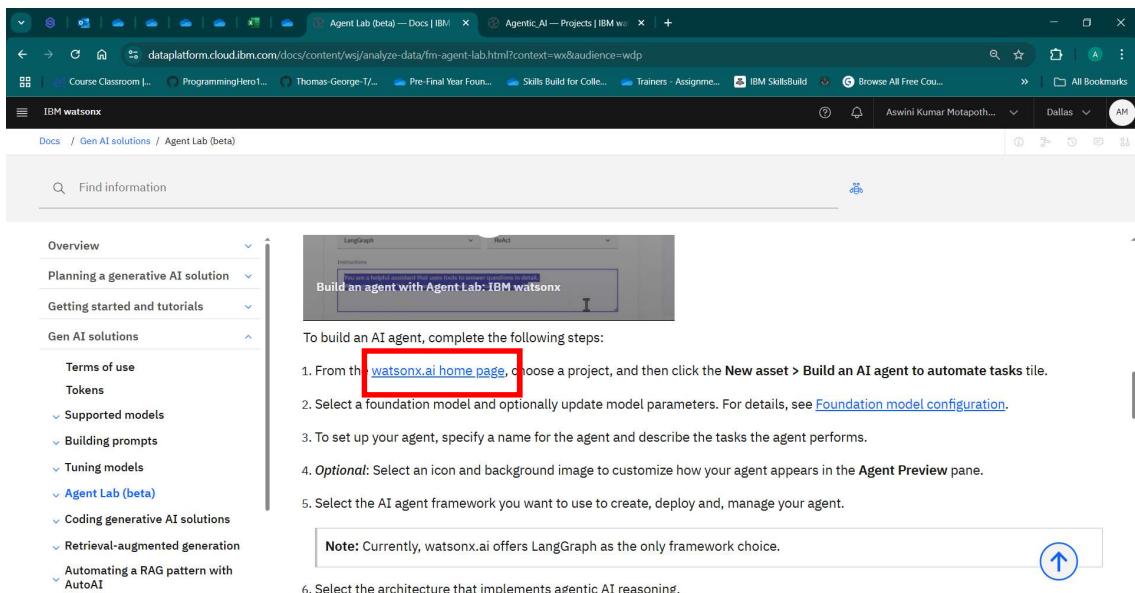
You created project Agentic_AI Today at 3:44 PM

Step17: Go to the previous tab in browser.(remember this step).



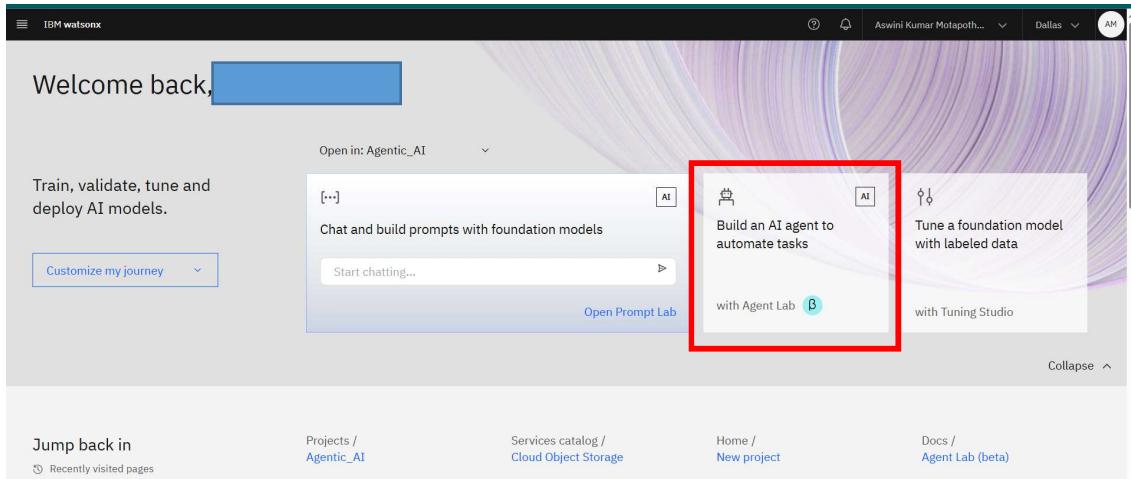
The screenshot shows a web browser window with multiple tabs open. The active tab is 'Agent Lab (beta) — Docs | IBM' (highlighted by a red box). Other tabs include 'Agentic_AI — Projects | IBM' and several others related to IBM WatsonX. The main content area displays the 'Agent Lab (beta)' documentation, specifically the 'Build an AI agent' section. It includes a screenshot of the LangGraph interface and a numbered list of steps for building an AI agent.

Step18: Click on Watsonx.ai home page

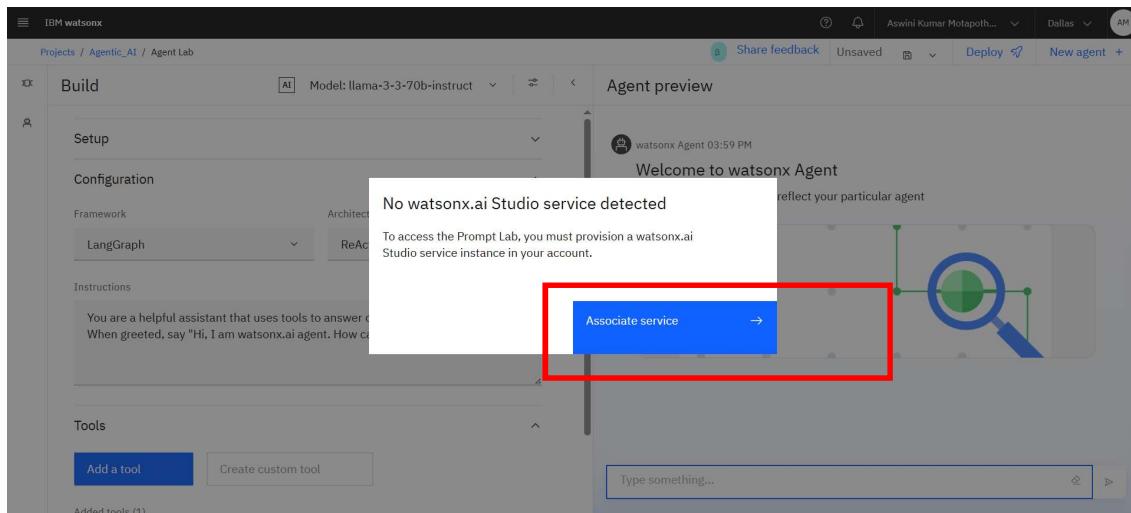


This screenshot is identical to the one above, showing the 'Agent Lab (beta)' documentation page. However, a red box highlights the 'watsonx.ai home page' link in the first item of the 'To build an AI agent, complete the following steps:' list. This indicates the user should click on this link to proceed.

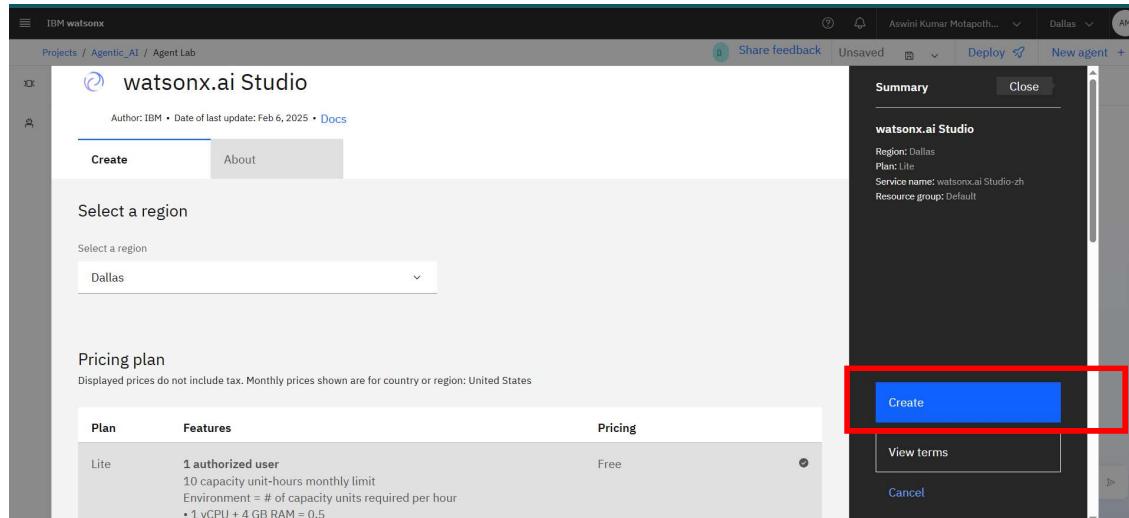
Step19: Now you can click on Build an AI agent to automate tasks.(If you not in this page during this experiment kindly check previous step. carefully)



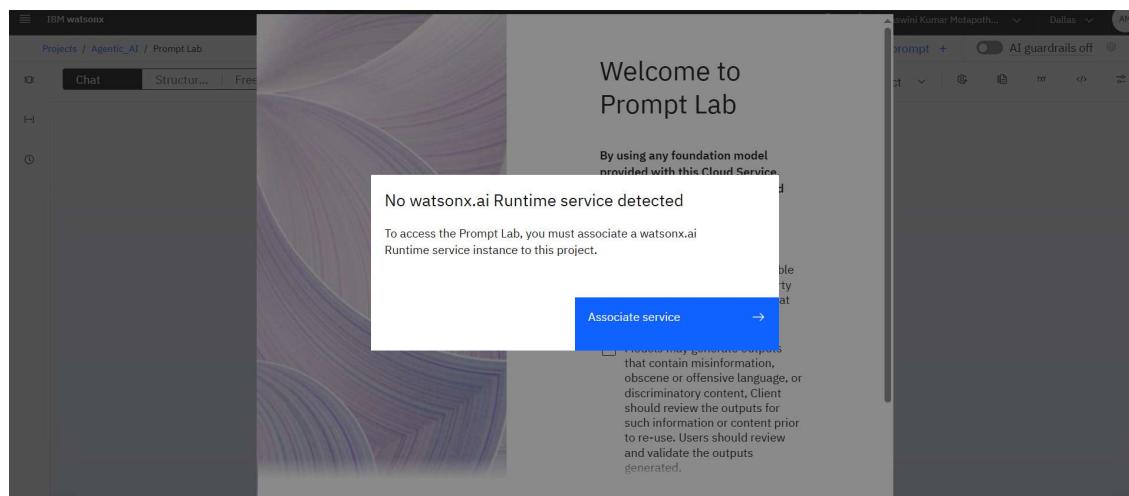
Step20: Click on Associate service



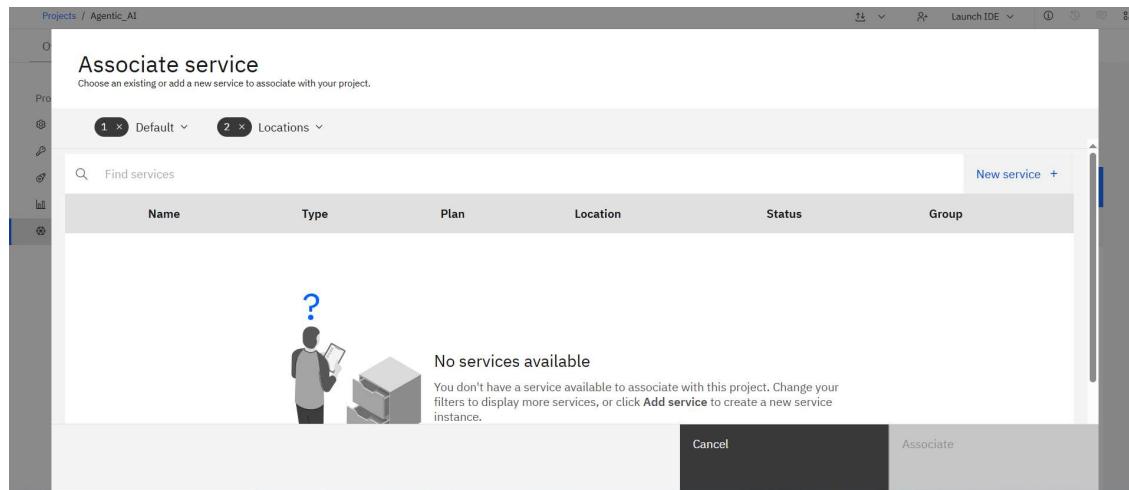
Step21: Click on Create



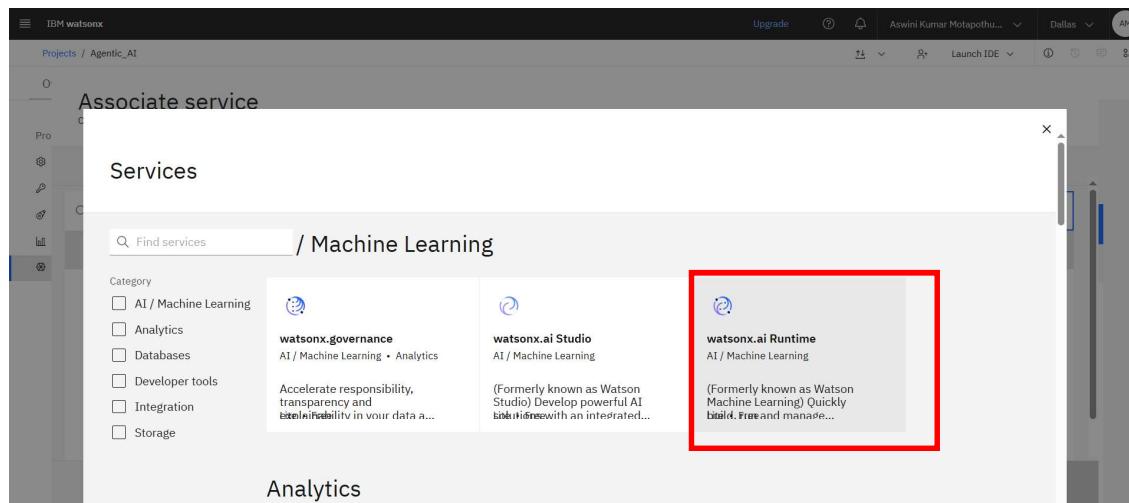
Step22: Click on Associate service.(This service is Watsonx.ai Runtime service)

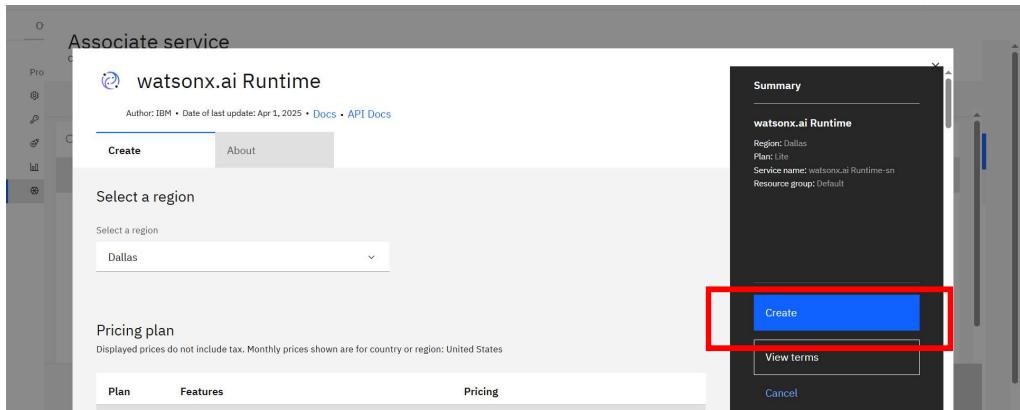


Step23: Click on New service.

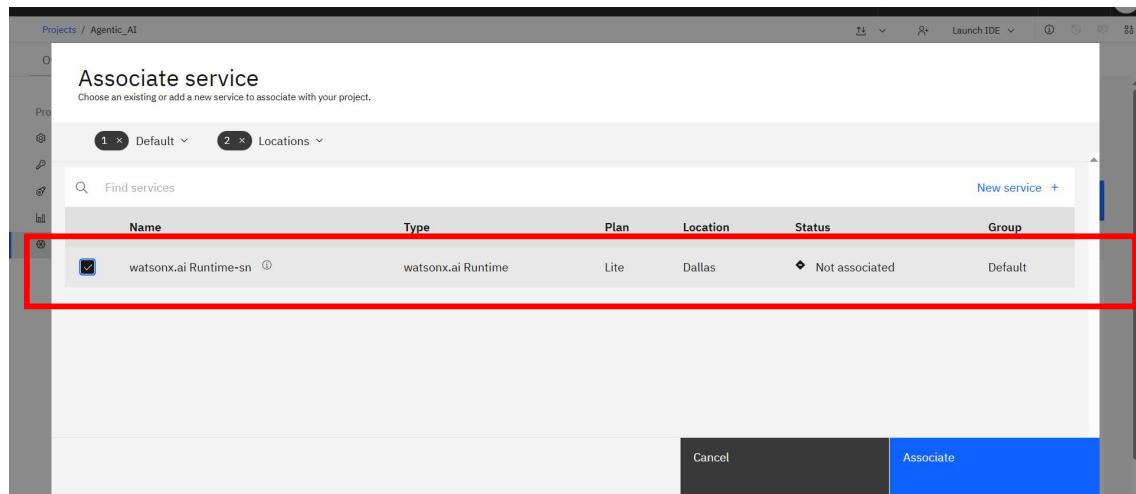


Step24: Click on Watson.ai Runtime & Click on Create.





Step25: Click on Watson.ai Runtime check box and click on Associate.



Step26: Repeat step17 & Step 18 , This the page. Click on Build AI agent to automate tasks.

Welcome back, [REDACTED]

Train, validate, tune and deploy AI models.

Open in: Agentic_AI

[..] Chat and build prompts with foundation models Start chatting... Open Prompt Lab

Build an AI agent to automate tasks with Agent Lab (beta)

Tune a foundation model with labeled data with Tuning Studio

Customize my journey

Jump back in Projects / Agentic_AI Agentic_AI / Prompt Lab Agentic_AI / Agent Lab Services catalog / Cloud Object Storage

Step27: This is Watsonx Agent , now change the model here

IBM Watsonx

Projects / Agentic_AI / Agent Lab

Build Model: llama-3-3-70b-instruct

Setup Configuration

Framework: LangGraph Architecture: ReAct

Instructions: You are a helpful assistant that uses tools to answer questions in detail. When greeted, say "Hi, I am watsonx.ai agent. How can I help you?"

Tools: Add a tool Create custom tool

Agent preview: watsonx Agent 04:16 PM Welcome to watsonx Agent Change this description to reflect your particular agent

Type something...

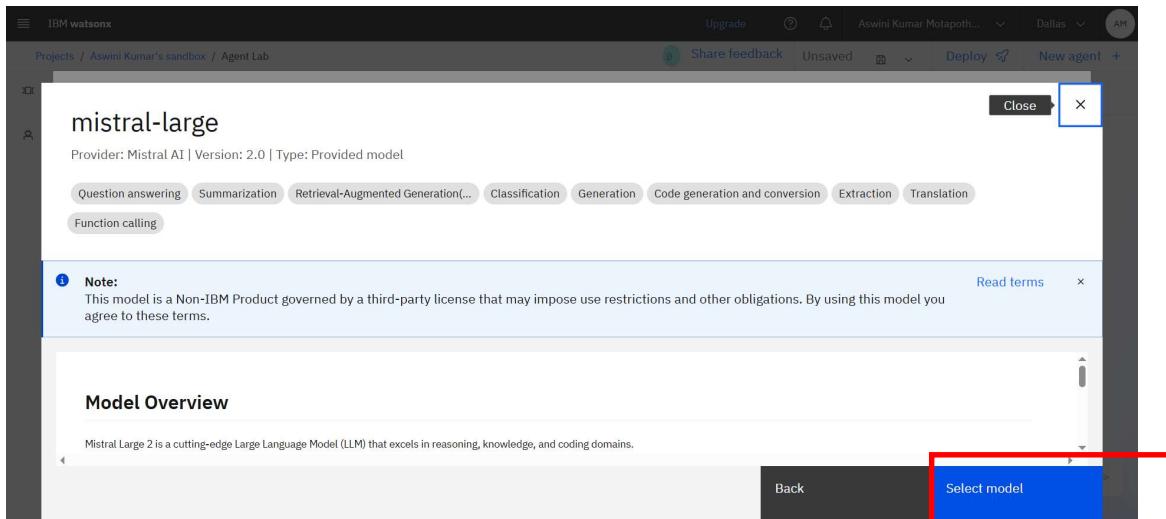
Step28: Click on “ View all foundation models” to change the model.

The screenshot shows the IBM Watsonx Agent Lab interface. The 'Build' tab is active. In the top right, there's a 'Model' dropdown set to 'llama-3-3-70b-instruct'. A red box highlights this dropdown, and a sub-menu is open with the option 'View all foundation models'.

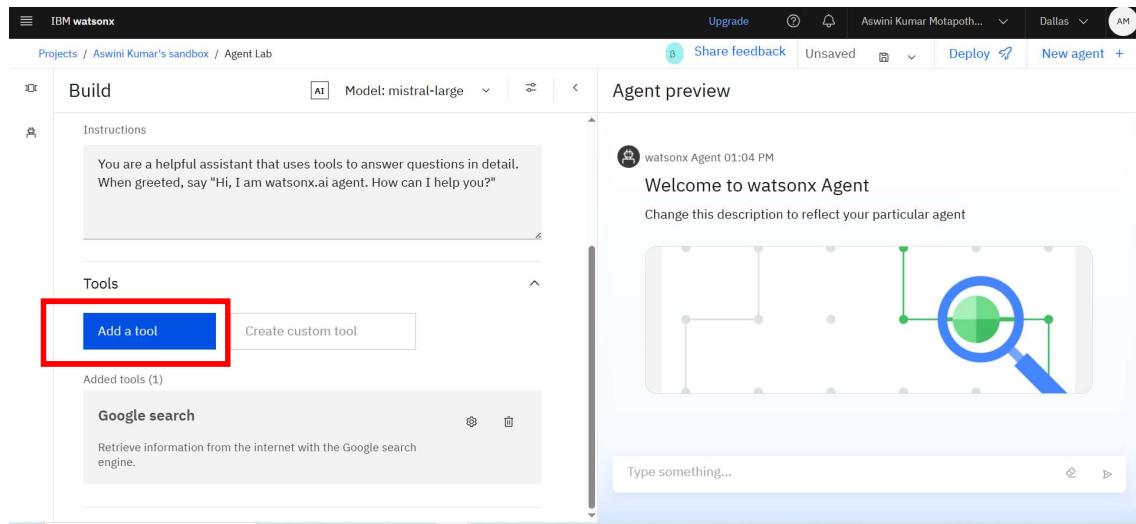
Step29: Now select mistral – large model .

The screenshot shows a modal dialog titled 'Select a foundation model'. It contains a search bar and two tabs: 'All models' (selected) and 'Model benchmarks'. The main area lists several models, with 'mistral-large' highlighted by a red box. The description below it reads: 'Mistral Large, the most advanced Large Language Model (LLM) developed by ...'. The provider is listed as 'Mistral AI'.

Step30: Now click on Select model .

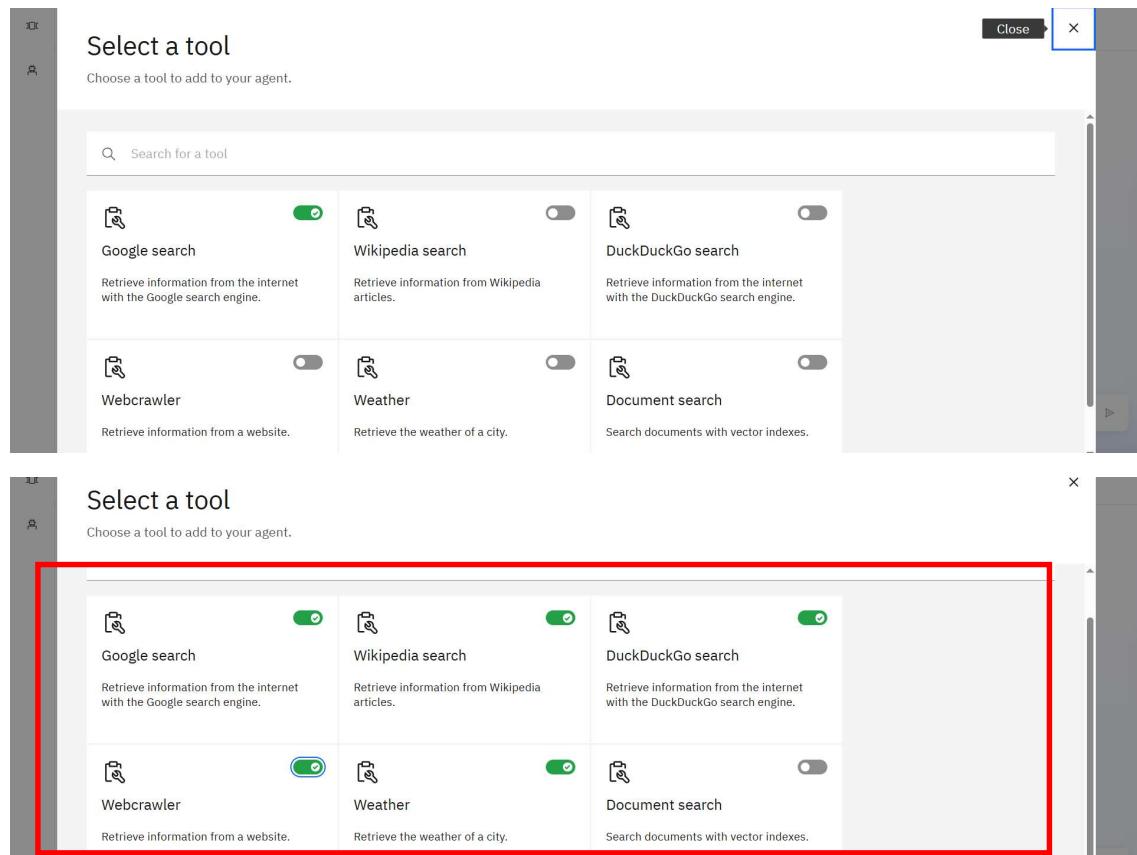


Step31: Click on Add a tool



The screenshot shows the IBM Watsonx interface for building an agent. On the left, under the 'Tools' section, there is a button labeled 'Add a tool' which is highlighted with a red box. To its right is another button labeled 'Create custom tool'. Below these buttons, there is a list titled 'Added tools (1)' containing a single item: 'Google search'. On the right side of the screen, there is a preview area titled 'Agent preview' showing a welcome message from 'watsonx Agent 01:04 PM'.

Step32: Enable the tools (Shown in picture)



The image contains two screenshots of the 'Select a tool' dialog box. The top screenshot shows the initial state where all tool toggles are off. The bottom screenshot shows the state after enabling all tools, with all toggles now turned on. A large red box surrounds the entire list of tools in the bottom screenshot, highlighting the changes made.

Tool	Description	Status (Top Screenshot)	Status (Bottom Screenshot)
Google search	Retrieve information from the internet with the Google search engine.	Off	On
Wikipedia search	Retrieve information from Wikipedia articles.	Off	On
DuckDuckGo search	Retrieve information from the internet with the DuckDuckGo search engine.	Off	On
Webcrawler	Retrieve information from a website.	Off	On
Weather	Retrieve the weather of a city.	Off	On
Document search	Search documents with vector indexes.	Off	On

Step33: Type here your question here. This is output

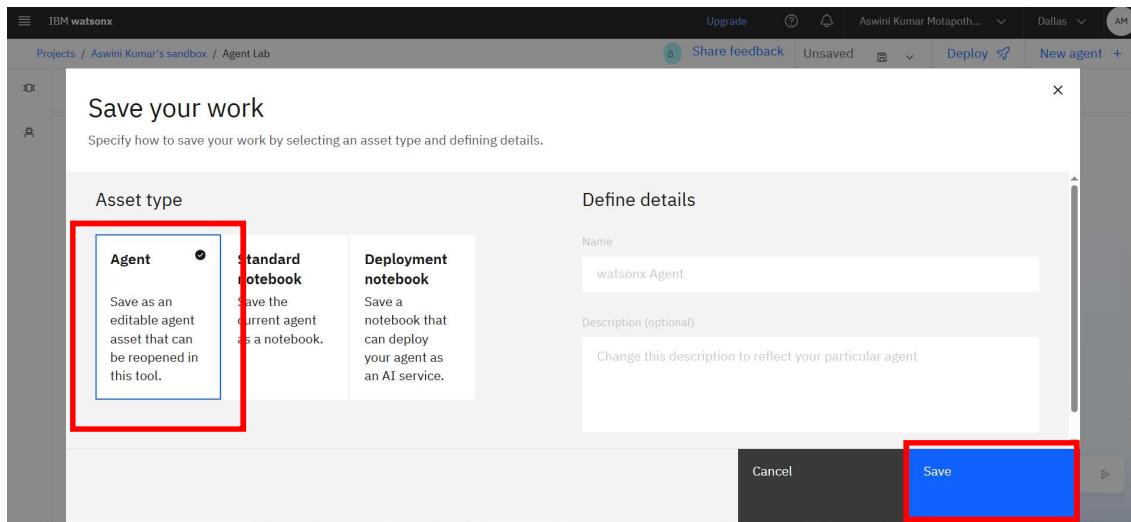
The screenshot shows the IBM Watsonx interface. On the left, there's a sidebar titled 'Build' with several search engine options: Wikipedia search, DuckDuckGo search, Webcrawler, and Weather. The main area is titled 'Agent preview' and shows a message from 'watsonx Agent 01:05 PM': 'Welcome to watsonx Agent'. Below it says 'Change this description to reflect your particular agent'. At the bottom of this section is a red-bordered input field containing the question 'What is Edunet foundation.'

This screenshot shows the same interface after the question was asked. The 'Agent preview' section now displays a response from 'AM' at 01:05 PM: 'What is Edunet foundation.'. Below it, 'watsonx Agent' responds with 'Here are some results I found:' followed by a list of items. The first item is '1. Edunet Foundation: Home' with a description and URL. The second item is '2. Edunet Foundation | LinkedIn' with a description and URL. A red box highlights the 'Save as' button in the top right corner of the preview area.

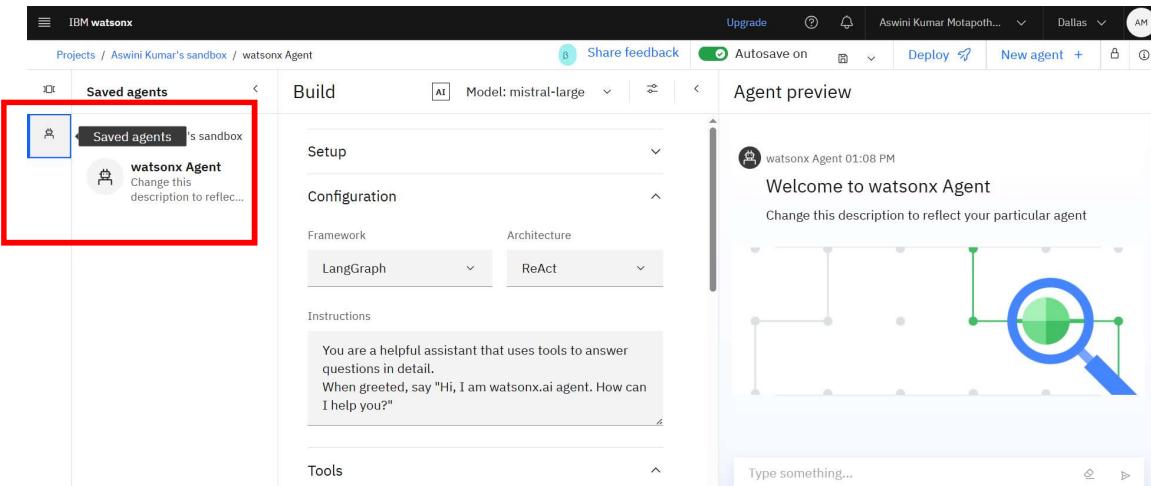
Step34: Click on Save as icon .

This screenshot shows the interface after the 'Save as' button was clicked. The 'Agent preview' section now includes a 'Save as' button in its top right corner. The rest of the interface remains the same, showing the build configuration and the AI's previous responses.

Step35: Save your work, choose Agent , click on save



Step36: Your saved agents are available here



Step37: Here sample agents are available

The screenshot shows the IBM Watsonx Agent interface. On the left, there's a sidebar with a red box highlighting the 'Sample agents' tab. The main area displays a sample agent named 'Sous Chef' with the description: 'Generating tasty recipe ideas based on the ingredients they have available.' Below this, there are sections for 'Setup', 'Configuration', 'Framework' (LangGraph), 'Architecture' (React), 'Instructions' (containing a greeting message), and 'Tools'. On the right, there's an 'Agent preview' window showing a welcome message and a search icon.

Step38: Click on sample agents and click on overwrite

The screenshot shows the same IBM Watsonx Agent interface as before, but with a modal dialog box overlaid. The dialog contains the text: 'Overwrite your agent with the sample agent...'. It includes 'Close' and 'Cancel' buttons on the left, and 'Open new agent' and a large blue 'Overwrite' button on the right. A red box highlights the 'Overwrite' button. The background of the interface is dimmed.

Step39: This is the output from sample agent & click on Deploy

The screenshot shows the IBM Watsonx interface. On the left, there's a sidebar with sections like Build, Setup, Configuration, and Tools. The main area is titled 'Agent preview' and shows a conversation between 'AM' and 'Sous Chef'. AM asks for a chicken biryani recipe, and Sous Chef responds with a simple and delicious recipe for Chicken Biryani. Below the conversation, there's a section for 'Ingredients:' with a bulleted list: 2 cups basmati rice, 500g chicken, cut into pieces, 2 large onions, thinly sliced, 3 medium tomatoes, finely chopped, and 2 tbsp ginger-garlic paste. At the bottom, there's a search bar with the placeholder 'Type something...'. The 'Deploy' button at the top right of the preview area is highlighted with a red box.

Step40: Now we have to create a API key (Click create to open the API key page in new window.)

The screenshot shows the 'Deploy as an AI service' dialog box. It has a header 'Deploy as an AI service' and a sub-instruction: 'Create an online deployment. If you want to edit code in notebook format before deploying, save as a deployment notebook. [Learn more.](#)'. Below this, there's a note: 'You must create a user API key. Click Create to open the API key page in a new tab.' The 'Create' button is highlighted with a red box. The 'Define details' section includes fields for 'Deployment name' (set to 'Sous Chef'), 'Target deployment space' (with a 'New deployment space' button), and a link 'Why don't I see all of my spaces?'. At the bottom, there are 'Cancel' and 'Deploy' buttons.

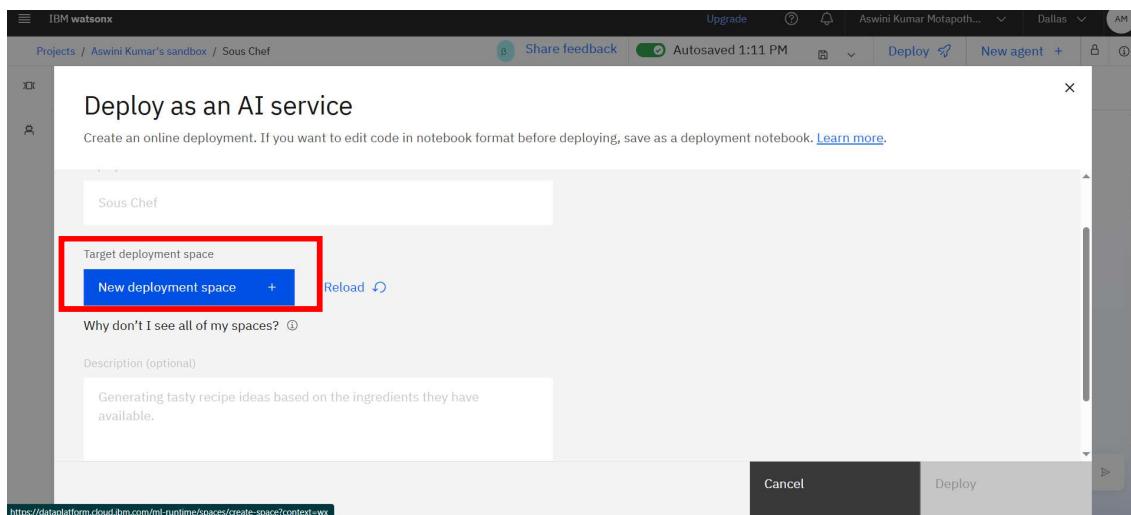
Step41: Click on create a key option, User API key successfully created.

The screenshot shows the IBM Watsonx dashboard. At the top, there's a navigation bar with 'IBM watsonx', 'Upgrade', a user profile for 'Aswini Kumar Motapothula', 'Dallas', and a dark mode toggle. Below the navigation, the user's name and email are displayed, along with a link to edit their profile. There are three tabs: 'Profile', 'Git integrations', and 'User API key', with 'User API key' being the active tab. A green notification box is visible, stating 'User API key is successfully created. Your new key is stored in IBM watsonx and IBM Cloud.' To the right of this box is a blue button labeled 'Create a key' with a '+' sign. Both the notification box and the 'Create a key' button are highlighted with red boxes.

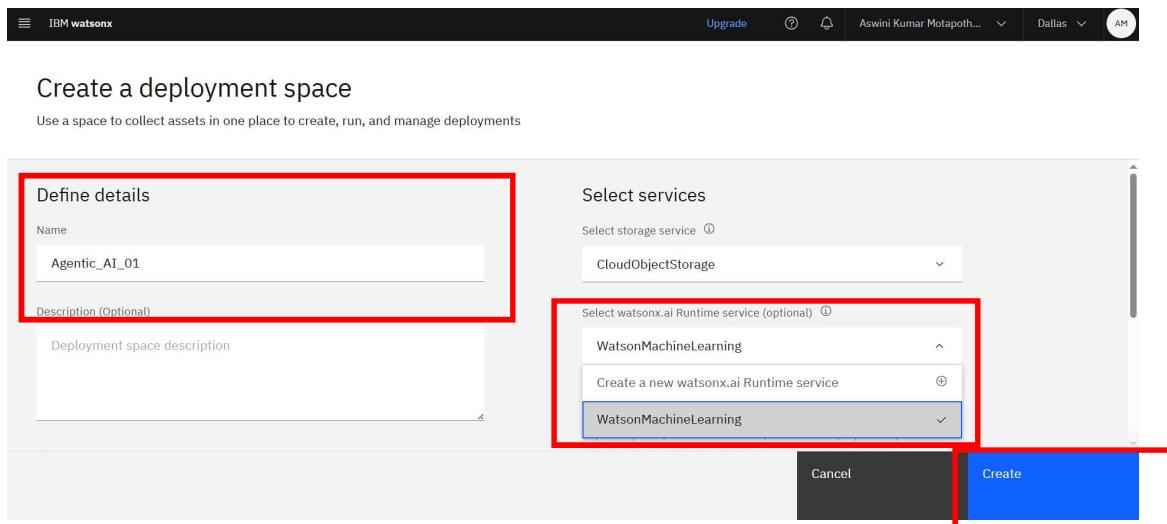
Step42: Click on Reload button.

The screenshot shows a modal dialog titled 'Deploy as an AI service'. The dialog has a message at the top: 'Create an online deployment. If you want to edit code in notebook format before deploying, save as a deployment notebook. [Learn more](#)'. Below this, a blue info box says 'You must create a user API key. Click Create to open the API key page in a new tab.' To the right of this box is a 'Reload' button. The main area of the dialog is titled 'Define details' and contains fields for 'Deployment name' (set to 'Sous Chef') and 'Target deployment space' (with a 'New deployment space' button and a 'Reload' button). At the bottom of the dialog are 'Cancel' and 'Deploy' buttons. The 'Reload' button in the info box is highlighted with a red box.

Step43: Click on New deployment space.



Step44: Enter deployment space name and select Watsonx.ai Runtime service. Click on create.



Step45: Now your space is preparing, once prepare it's shown as below

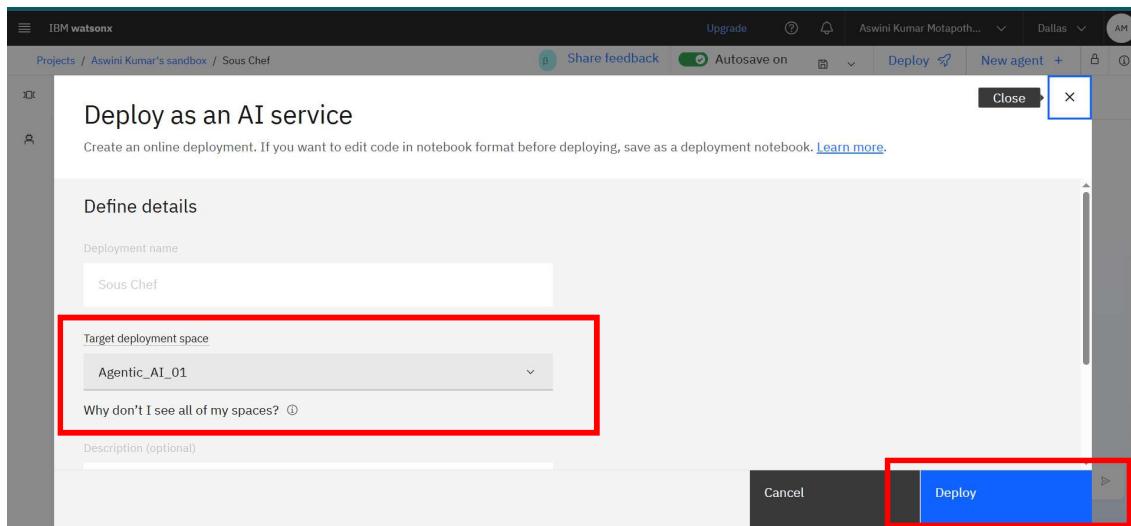
The screenshot shows the 'Create a deployment space' page. On the left, there's a 'Define details' section with a 'Name' field containing 'Agentic_AI_01'. A central modal window displays the message 'The space is being prepared...' with the sub-instruction 'The space "Agentic_AI_01" is being created.' Below this, a progress bar indicates 'Step 1 of 1. Creating deployment space.' At the bottom right of the modal, there are 'Cancel' and 'Creating' buttons. A 'View new space' button is also visible.

The screenshot shows the same 'Create a deployment space' page after the process has completed. The central modal now displays 'The space is ready' with the instruction 'Click View new space to view the space and associated assets.' and the status 'Step 1 of 1. Creating deployment space.' is marked as completed (green dot). The 'View new space' button is highlighted with a blue background.

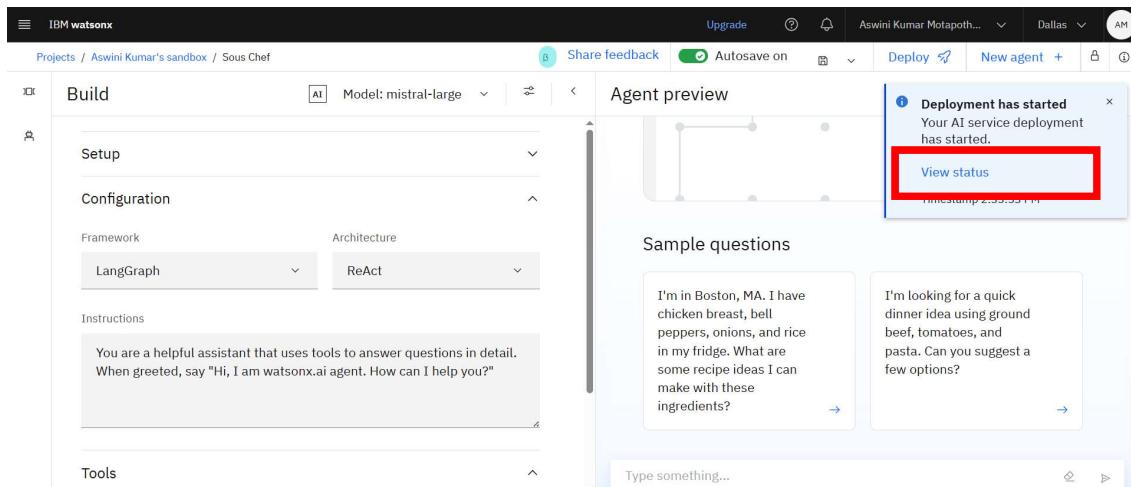
Step46: Click on Deploy.

The screenshot shows the 'Sous Chef' project page in Watsonx. On the right side, there's an 'Agent preview' section featuring a magnifying glass icon over a network diagram. Below it is a 'Sample questions' section with two examples. At the top right of the page, there's a 'Deploy' button with a red box drawn around it. The navigation bar at the top includes 'Upgrade', 'Share feedback', 'Autosave on', 'Dallas', and other account information.

Step47: Select target deployment space. Click on Deploy



Step48: Once deployed click on View status.



Step49: It's initializing and deployed.

The screenshot shows the IBM WatsonX interface with the 'Deployments' tab selected. A single deployment entry is listed:

Name	Type	Status	Asset	Tags	Last modified
(q) Sous Chef	Online	Initializing	Sous Chef	wx-agent	30 seconds ago Aswini Kumar Motapothula (You)

Below the table, there are pagination controls: 'Items per page: 20' and '1 of 1 pages'.

The screenshot shows the IBM WatsonX interface with the 'Deployments' tab selected. The same deployment entry is listed, but its status has changed to 'Deployed':

Name	Type	Status	Asset	Tags	Last modified
(q) Sous Chef	Online	Deployed	Sous Chef	wx-agent	1 minute ago Aswini Kumar Motapothula (You)

Below the table, there are pagination controls: 'Items per page: 20' and '1 of 1 pages'.

Step50: Click on Preview

The screenshot shows the deployment preview interface for the 'Sous Chef' deployment. The top navigation bar includes tabs for 'API reference', 'Test', and 'Preview'. The 'Preview' tab is highlighted with a red box.

Endpoints for inferencing (1)

Private endpoint

- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/5f6756cb-3705-404e-9f28-51241>
- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/5f6756cb-3705-404e-9f28-51241>

Bearer <token>

IAM

Public endpoint

- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/5f6756cb-3705-404e-9f28-51241>
- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/5f6756cb-3705-404e-9f28-51241>

About this deployment

Name: Sous Chef

Description: Generating tasty recipe ideas based on the ingredients they have available.

Deployment Details

Deployment ID: 5f6756cb-3705-404e-9f28-51241
Serving name: No serving name.
Software specification:
Copies: 1

Step51: Now give some question click on send. Successfully your agent given

The screenshot shows the IBM WatsonX interface with the 'Sous Chef' agent deployed and online. The 'Preview' tab is selected. A message from 'Sous Chef' at 02:39 PM says, "Welcome to Sous Chef Generating tasty recipe ideas based on the ingredients they have available." Below this is a search interface with a magnifying glass icon and a text input field containing "chiken biryani". A 'Send' button is located to the right of the input field.

The screenshot shows the IBM WatsonX interface with the 'Sous Chef' agent deployed and online. The 'Preview' tab is selected. A message from 'You' at 02:39 PM says, "chiken biryani". A response from 'Sous Chef' at 02:39 PM says, "Here are some search results for "chicken biryani":". It lists "1. Chicken Biryani Recipe - Swathi's Recipes" with a description: "Description: Learn how to make an aromatic, delicious, and the best Chicken Biryani in two ways – Homestyle and restaurant style." and a URL: "URL: [Swathi's Recipes](#)". Below the list is a search bar with the placeholder "Type something..." and a send icon.