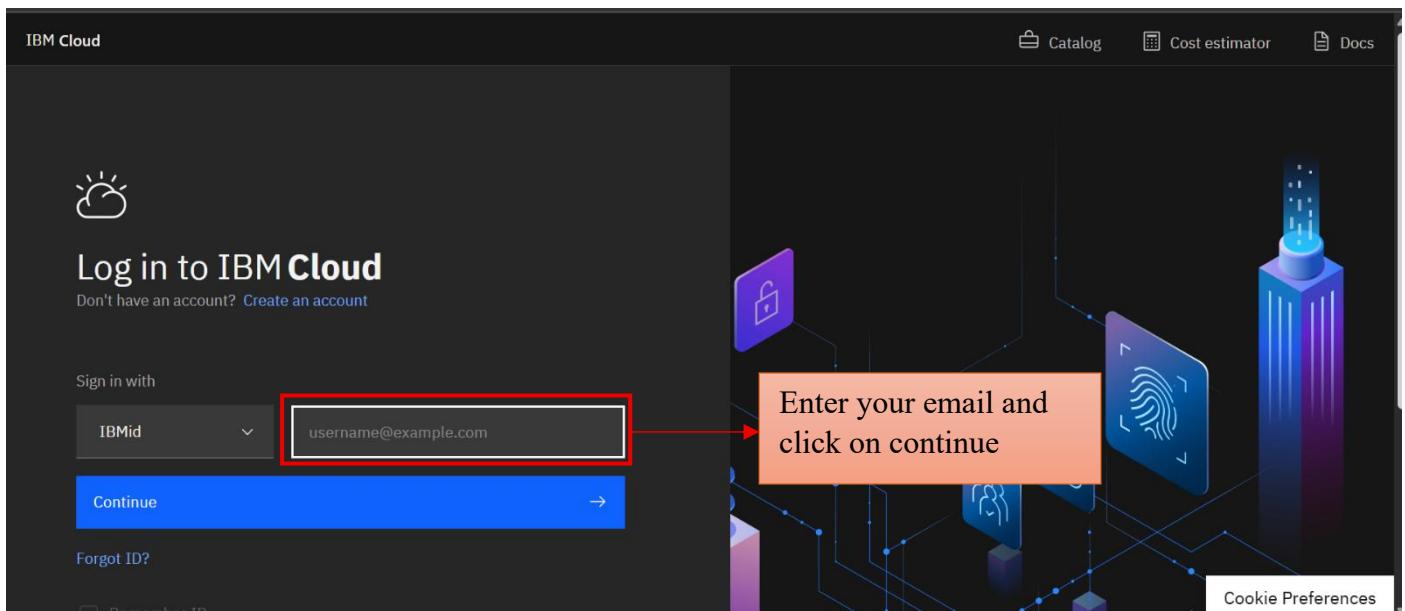


# Predictive Maintenance of Industrial Machinery

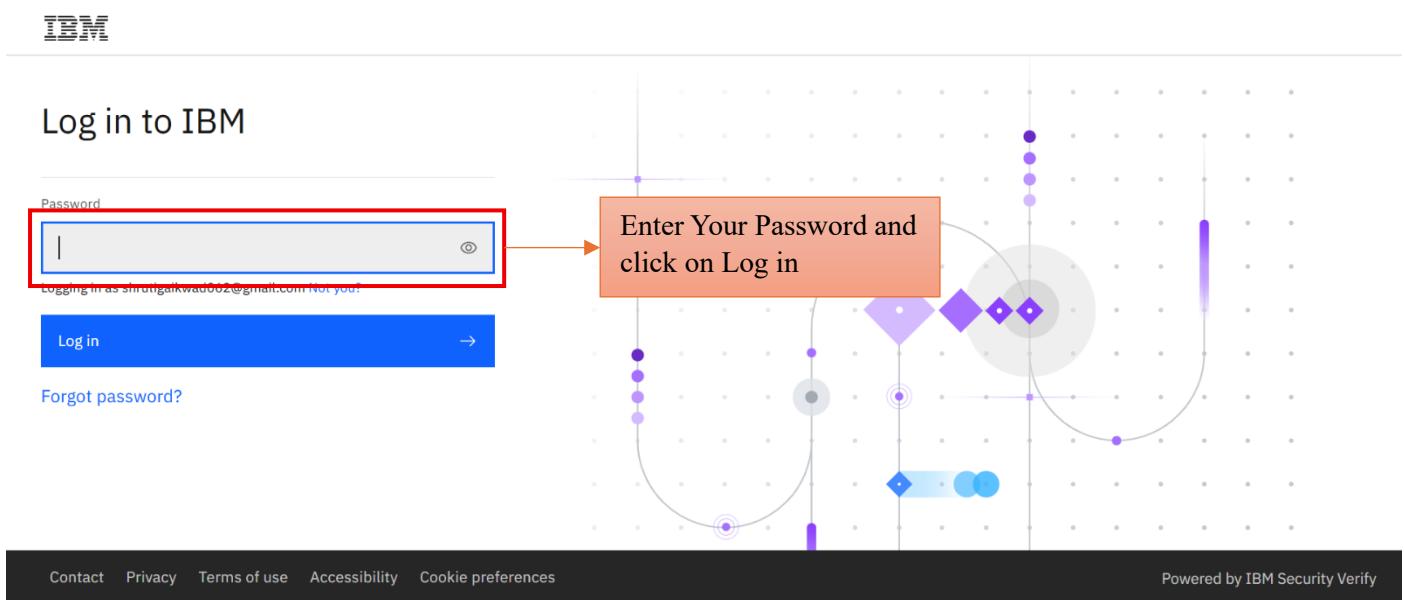
Here are all the steps to solve "Predictive Maintenance of Industrial Machinery" using IBM Cloud (Lite)

## 🌐 Login & Clean Up :

**Step 1 : Go to <https://cloud.ibm.com> and Login with your email ID**



**Step 2 : Enter Your Password**



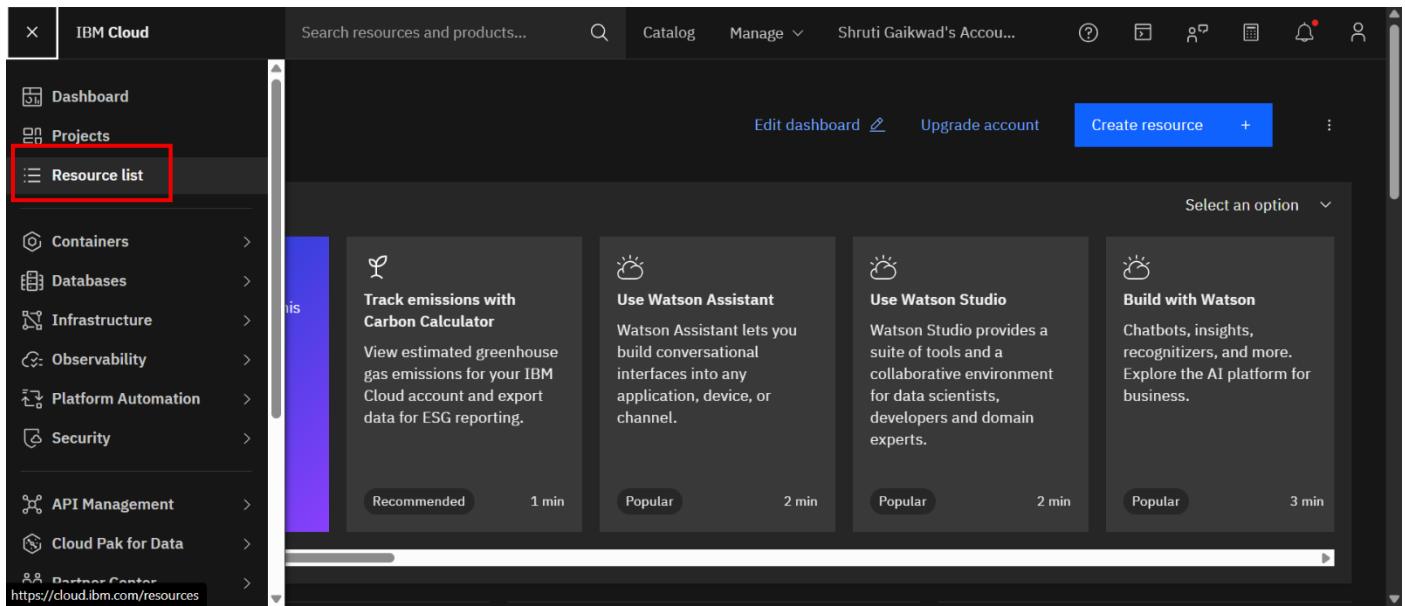
## Step 3: IBM Cloud Dashboard

The screenshot shows the IBM Cloud Dashboard. At the top, there is a navigation bar with icons for search, catalog, manage, and account information. Below the navigation bar, the main dashboard area has a title "Dashboard". On the left, there is a sidebar with various icons. A specific icon, which is a three-line menu icon, is highlighted with a red box. The main content area is titled "For you" and contains several cards. One card is highlighted with a blue box and has the title "Build". Other cards include "Track emissions with Carbon Calculator", "Use Watson Assistant", "Use Watson Studio", and "Build with Watson". Each card has a small description, a status indicator (e.g., Recommended, Popular), and a time estimate (e.g., 1 min, 2 min, 3 min).

## Step 4 : Go to Navigation Menu

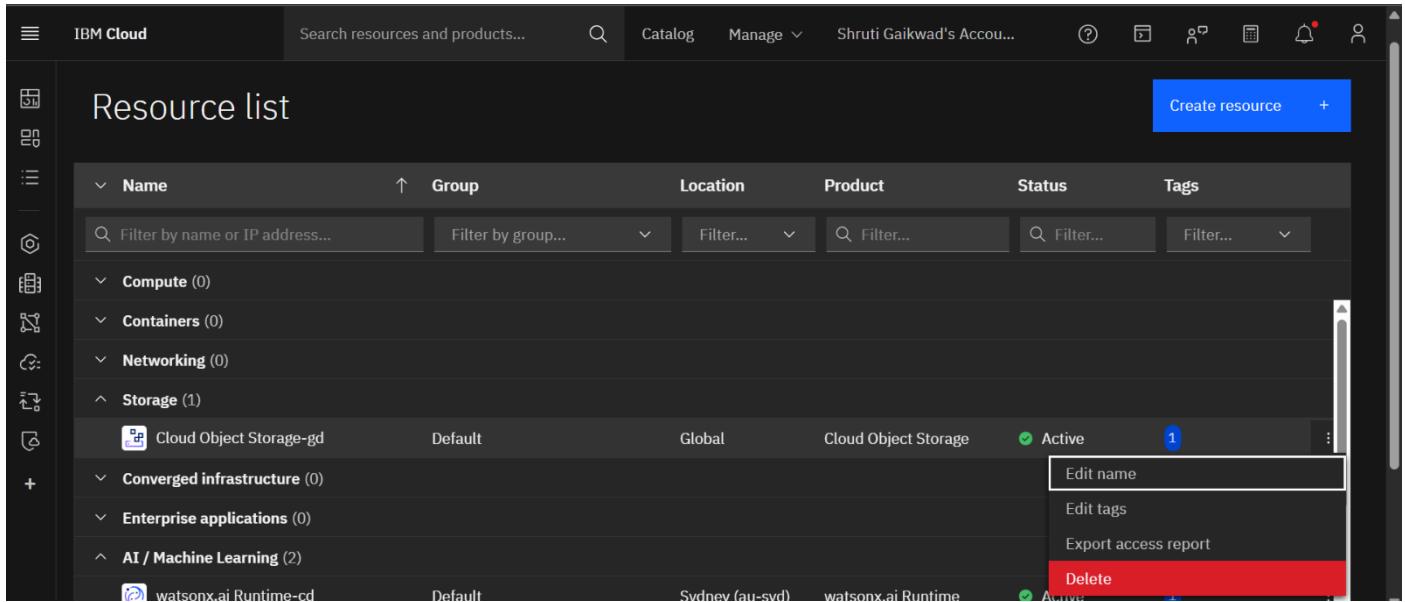
This screenshot is identical to the one above it, showing the IBM Cloud Dashboard. The only difference is that the three-line menu icon in the sidebar is now highlighted with a red box, indicating it has been selected.

## Step 5 : Go to Resource List



The screenshot shows the IBM Cloud dashboard. The left sidebar has a red box around the 'Resource list' option under the 'Projects' section. The main content area features several promotional cards: 'Track emissions with Carbon Calculator' (Recommended, 1 min), 'Use Watson Assistant' (Popular, 2 min), 'Use Watson Studio' (Popular, 2 min), and 'Build with Watson' (Popular, 3 min). The top navigation bar includes 'IBM Cloud', a search bar, 'Catalog', 'Manage', and 'Shruti Gaikwad's Account'.

## Step 6 : Delete old or unused services to stay within Lite plan limits

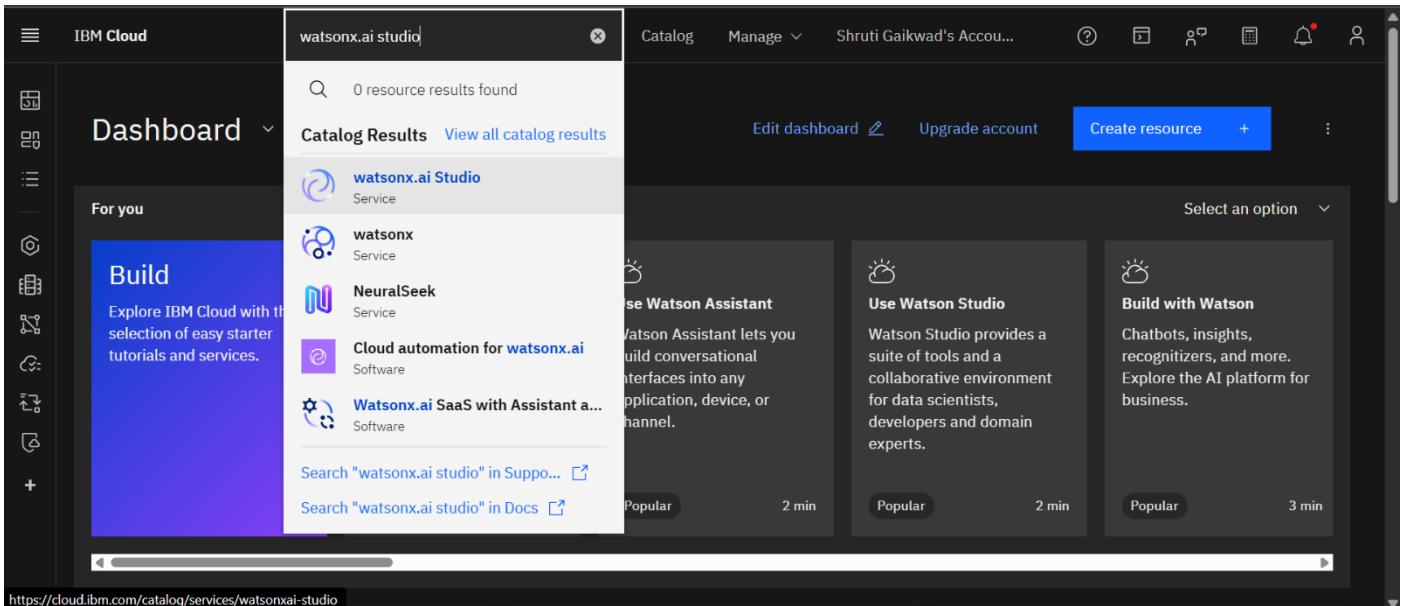


The screenshot shows the 'Resource list' page. The left sidebar lists categories like Compute, Containers, Networking, Storage, Converged infrastructure, Enterprise applications, and AI / Machine Learning. In the main table, a row for 'Cloud Object Storage-gd' is selected. A context menu is open over this row, with 'Delete' highlighted in red at the bottom. The table columns are Name, Group, Location, Product, Status, and Tags.

Name	Group	Location	Product	Status	Tags
Cloud Object Storage-gd	Default	Global	Cloud Object Storage	Active	<ul style="list-style-type: none"><li>Edit name</li><li>Edit tags</li><li>Export access report</li><li>Delete</li></ul>
watsonx.ai Runtime-cd	Default	Sydney (au-syd)	watsonx.ai Runtime	Active	

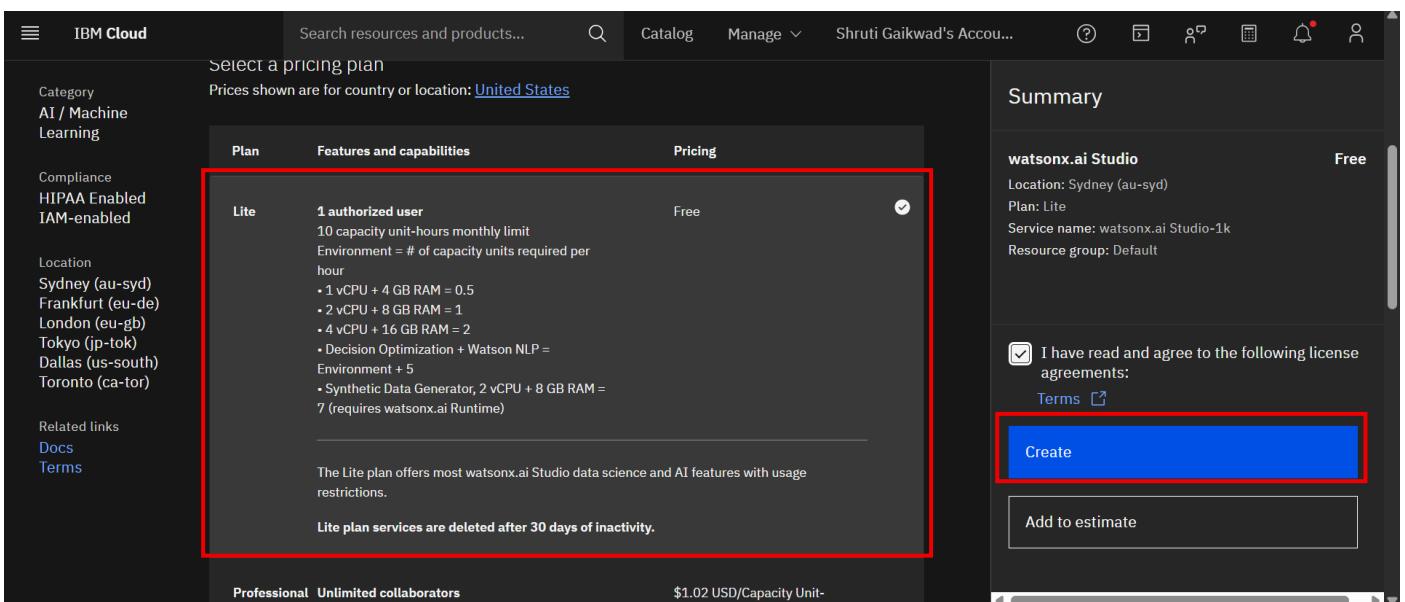
## Create Watsonx.ai Service :

### Step 7 : In the top search bar watsonx.ai Studio



The screenshot shows the IBM Cloud Catalog interface. The search bar at the top contains the text "watsonx.ai studio". Below the search bar, the results are displayed under "Catalog Results". The first result is "watsonx.ai Studio" (Service), which is highlighted with a blue border. Other results include "watsonx" (Service), "NeuralSeek" (Service), "Cloud automation for watsonx.ai" (Software), and "Watsonx.ai SaaS with Assistant a..." (Software). To the right of the search results, there are three cards: "Use Watson Assistant", "Use Watson Studio", and "Build with Watson". A "Create resource" button is located in the top right corner of the catalog area.

### Step 8 : Choose First Plan I.e. Free plan and click on Create



The screenshot shows the "Select a pricing plan" page for the "watsonx.ai Studio" service. On the left, there is a sidebar with categories like AI / Machine Learning, Compliance, HIPAA Enabled, IAM-enabled, Location, and Related links. The main area shows a table with columns: Plan, Features and capabilities, and Pricing. The "Lite" plan is selected and highlighted with a red box. The "Features and capabilities" section for the Lite plan includes: 1 authorized user, 10 capacity unit-hours monthly limit, Environment = # of capacity units required per hour, and a list of configurations: • 1 vCPU + 4 GB RAM = 0.5, • 2 vCPU + 8 GB RAM = 1, • 4 vCPU + 16 GB RAM = 2, • Decision Optimization + Watson NLP = Environment + 5, • Synthetic Data Generator, 2 vCPU + 8 GB RAM = 7 (requires watsonx.ai Runtime). Below this, a note states: "The Lite plan offers most watsonx.ai Studio data science and AI features with usage restrictions." At the bottom of the table, it says: "Lite plan services are deleted after 30 days of inactivity." To the right, there is a "Summary" section for the "watsonx.ai Studio" service, showing details like Location: Sydney (au-syd), Plan: Lite, Service name: watsonx.ai Studio-1k, and Resource group: Default. There is also a checkbox for "I have read and agree to the following license agreements:" followed by a "Create" button, which is also highlighted with a red box. Below the "Create" button is a "Add to estimate" button.

## Step 9 : Click Launch

The screenshot shows the IBM Cloud interface with the service 'watsonx.ai Studio-1k' selected. On the left, there's a sidebar with 'Manage' and 'Plan' options. The main area displays the service's logo, name, and a brief description: 'Build and deploy machine learning models on either platform. Work with foundation models on watsonx as a Service.' Below this is a large blue button labeled 'Launch in'. This button is highlighted with a red rectangular box.

### 📁 Create a New Project :

## Step 10 : Select Watsonx.ai Runtime and Click Next

The screenshot shows the Watsonx.ai Studio welcome screen for user 'Shruti'. It features a sidebar with 'Quick start' options like 'Build customer profiles', 'Catalog and govern data', 'Build and manage ML models', and 'Query data anywhere'. The main area has sections for 'Take a tutorial', 'Work with Watsonx', and 'Build and manage ML models with watsonx.ai Studio'. A central modal window titled 'Get started' contains two options: 'Provision watsonx.ai Studio' (unchecked) and 'Provision watsonx.ai Runtime' (checked). A red box highlights the 'Provision watsonx.ai Runtime' button. At the bottom of the modal is a 'Next' button, also highlighted with a red box.

## Step 11 : Choose Free Plan and Click Create

The screenshot shows the 'watsonx.ai Runtime' creation dialog. On the left, there's a 'Select a region' dropdown set to 'Sydney'. Below it is a 'Pricing plan' section with a note about displayed prices not including tax. A table compares the 'Lite' plan against the 'Features' and 'Pricing' columns. The 'Lite' plan is highlighted with a red box. It includes 'Service Instance' details: 20 capacity unit-hours (CUH) per month, 50,000 tokens/data points per month, and 100 pages per month. Foundation models are also listed. On the right, a summary panel shows the service name as 'watsonx.ai Runtime', region as 'Sydney', plan as 'Lite', and resource group as 'Default'. A large blue 'Create' button is highlighted with a red box.

## Step 12 : Select New project and Click Next

The screenshot shows the 'Welcome, Shruti!' screen of the Watsonx.ai Studio. On the left, there are sections for 'Take a tutorial', 'Work with', 'Quick start', and 'What's new'. In the center, there's a 'Build and manage ML models with watsonx.ai Studio' section. A modal dialog titled 'Get started' is open, showing options like 'Sample project' and 'New project'. The 'New project' option is highlighted with a red box. Below it is a 'Next' button, which is also highlighted with a red box.

## Step 13 : Fill the Details like Name, Description

The screenshot shows the 'Create a project' interface in IBM Watsonx.ai Studio. On the left, there's a sidebar with '+ New' (selected), 'Local file', and 'Sample'. The main area is titled 'Define details'.

- Name:** Predictive Maintenance of Industrial Machinery
- Description (optional):** What's the purpose of this project?
- Tags (optional):** Add tags (with a note: Add tags to make projects easier to find. To add tags, separate them with commas and press Enter).
- Define storage:**
  - ① Select storage service: A step with a red box around it.
  - Add: A blue link to add a storage instance.
  - Note: Add an object storage instance, and then return to this page and click Refresh.

At the bottom right are 'Cancel' and 'Create' buttons.

## Step 14 : Under Storage, Click Add

This screenshot is similar to the previous one but focuses on the 'Select storage service' step.

- Tags (optional):** Add tags (with a note: Add tags to make projects easier to find. To add tags, separate them with commas and press Enter).
- Define storage:**
  - ① Select storage service: A step with a red box around it.
  - Add: A blue link to add a storage instance.
  - Note: Add an object storage instance, and then return to this page and click Refresh.
- ② Refresh:** A step with a red box around it.
- Project includes integration with Cloud Object Storage for storing project assets.**
- Advanced settings:** A dropdown menu.

At the bottom right are 'Cancel' and 'Create' buttons.

## Step 15 : Choose Second Plan i.e. Free Plan and Click Create

IBM Watsonx AI Studio

Search in your workspaces

Upgrade

Shruti Gaikwad's Account

Sydney

SG

Services catalog /

### Cloud Object Storage

Author: IBM • Date of last update: Apr 15, 2025 • Docs • API Docs

Create About

#### 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 is a Pay-as-You-Go option with a single, flat monthly rate (\$/GB) that includes storage, API operations, retrieval, and outbound bandwidth—making it ideal for high-activity workloads with frequent access and data transfer, such as analytics, media, and web apps. The plan includes built-in allowances that scale with stored capacity and offers automatic volume discounts as usage grows.	
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
Standard	Standard Plan is a flexible Pay-as-You-Go option with no minimum fee—ideal for workloads with large storage needs	

Summary

Cloud Object Storage

Region: Global

Plan: Lite(deprecated)

Service name: Cloud Object Storage-rn

Resource group: Default

Create

View terms

Cancel

## Step 16 : Under Storage, Click Refresh

IBM Watsonx AI Studio

Search in your workspaces

Upgrade

Shruti Gaikwad's Account

Sydney

SG

### Create a project

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

+ New

Local file

Sample

Tags (optional)

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

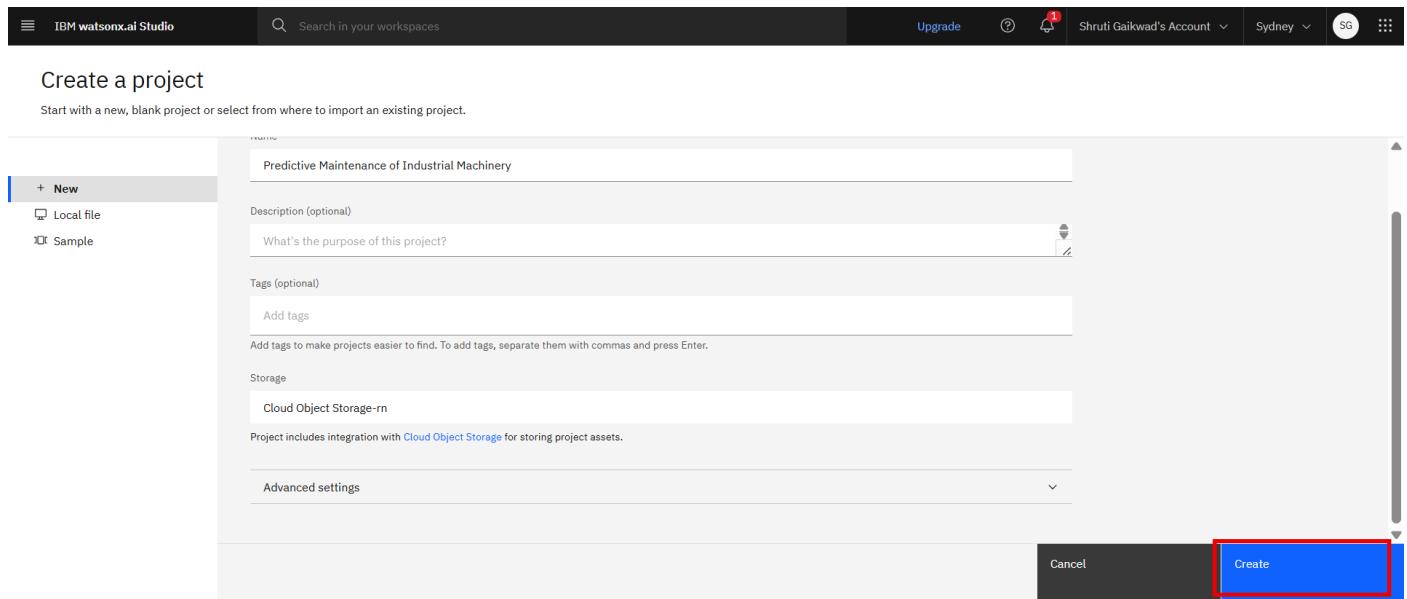
Project includes integration with Cloud Object Storage for storing project assets.

Advanced settings

Cancel

Create

## Step 17 : Click Create



## 🔗 Connect Runtime Service :

## Step 18 : Inside your new project, go to Manage tab

The screenshot shows the project dashboard for 'Predictive Maintenance of Industrial Machinery'. The top navigation bar includes 'Overview' (selected), 'Assets', 'Jobs', and 'Manage' (highlighted with a red box). Below the tabs, there are sections for 'Start working' (Add users as collaborators, Add data to work with, Work with data and models in Python or R notebooks, Build machine learning models automatically) and 'Recommended' (Collaborate, Share, etc.). The 'Manage' tab section contains cards for 'Assets', 'Resource usage', 'Your documentation', and 'Project history'.

## Step 19 : Click Services & Integrations and Click Associate Service

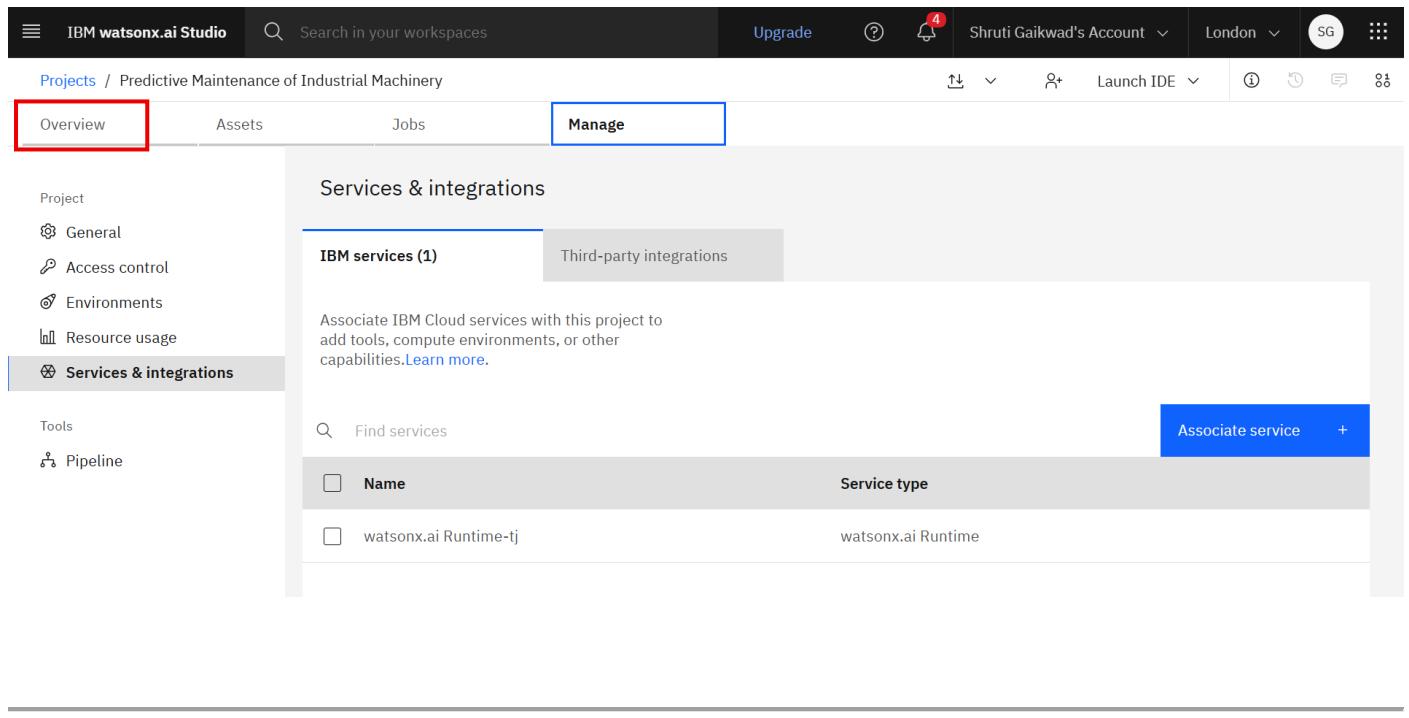
The screenshot shows the 'IBM Watsonx.ai Studio' interface with the 'Predictive Maintenance of Industrial Machinery' project selected. The 'Manage' tab is active. On the left, a sidebar lists 'Project' (General, Access control, Environments, Resource usage, Services & integrations), 'Tools' (Pipeline), and 'Jobs'. The 'Services & integrations' section is highlighted with a red box. It contains tabs for 'IBM services' and 'Third-party integrations', with 'IBM services' selected. A sub-section titled 'Associate IBM Cloud services with this project to add tools, compute environments, or other capabilities.' includes a 'Learn more' link. Below this is a search bar ('Find services') and a table with columns 'Name', 'Service type', and 'Status'. A large 'Associate service' button with a '+' icon is at the bottom right. A URL at the bottom of the page is: <https://au-syd.dai.cloud.ibm.com/projects/35078b7c-e393-44a7-8dc7-0503e72878f7/manage/services?context=cpdaas#>

## Step 20 : Select Service and Click Associate

The screenshot shows the 'Associate service' dialog box. At the top, it says 'Associate service' and 'Choose an existing or add a new service to associate with your project.' Below this are two dropdown menus: 'Default' (with one item) and 'Locations' (with two items). A table lists services: 'watsonx.ai Runtime-jc' (selected, highlighted with a red box), 'watsonx.ai Runtime', 'Lite', 'Sydney', 'Not associated', and 'Default'. At the bottom are 'Cancel' and 'Associate' buttons, with 'Associate' highlighted with a blue box.

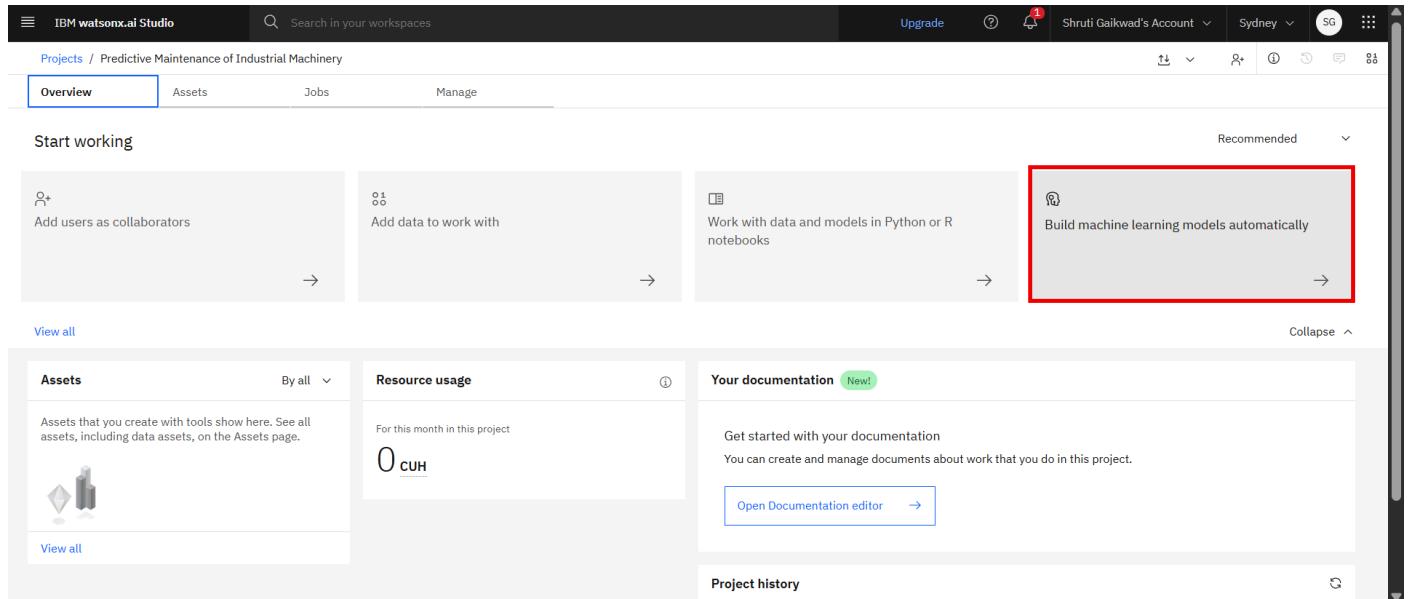
## Create AutoAI Model :

### Step 21 : Go to Overview tab



The screenshot shows the IBM Watsonx.ai Studio interface. At the top, there is a navigation bar with the title "IBM Watsonx.ai Studio", a search bar, and various account and location settings. Below the navigation bar, there is a horizontal menu with four tabs: "Overview", "Assets", "Jobs", and "Manage". The "Overview" tab is highlighted with a red border. On the left side, there is a sidebar with sections for "Project" (General, Access control, Environments, Resource usage) and "Services & integrations". The "Services & integrations" section is expanded, showing a sub-section for "IBM services (1)" which lists "watsonx.ai Runtime-tj" as a watsonx.ai Runtime service. A blue-bordered box highlights the "Manage" tab in the top menu.

### Step 22 : Click on Build machine learning model automatically



The screenshot shows the IBM Watsonx.ai Studio interface on the "Overview" tab. In the "Start working" section, there are four cards: "Add users as collaborators", "Add data to work with", "Work with data and models in Python or R notebooks", and "Build machine learning models automatically". The fourth card is highlighted with a red border. Below this section, there are three main sections: "Assets", "Resource usage", and "Your documentation". The "Your documentation" section includes a "New!" badge and a "Get started with your documentation" message with a "Open Documentation editor" button. A "View all" link is located at the bottom left of the main content area.

## Step 23 : Fill in Details like Name, description and click Create

The screenshot shows the 'Define details' section of the AutoAI experiment creation wizard. The 'Name' field contains 'Predictive Maintenance Model' and is highlighted with a red box. The 'Create' button at the bottom right is also highlighted with a red box. Other fields include 'Description (optional)' and 'Tags (optional)', both of which are currently empty.

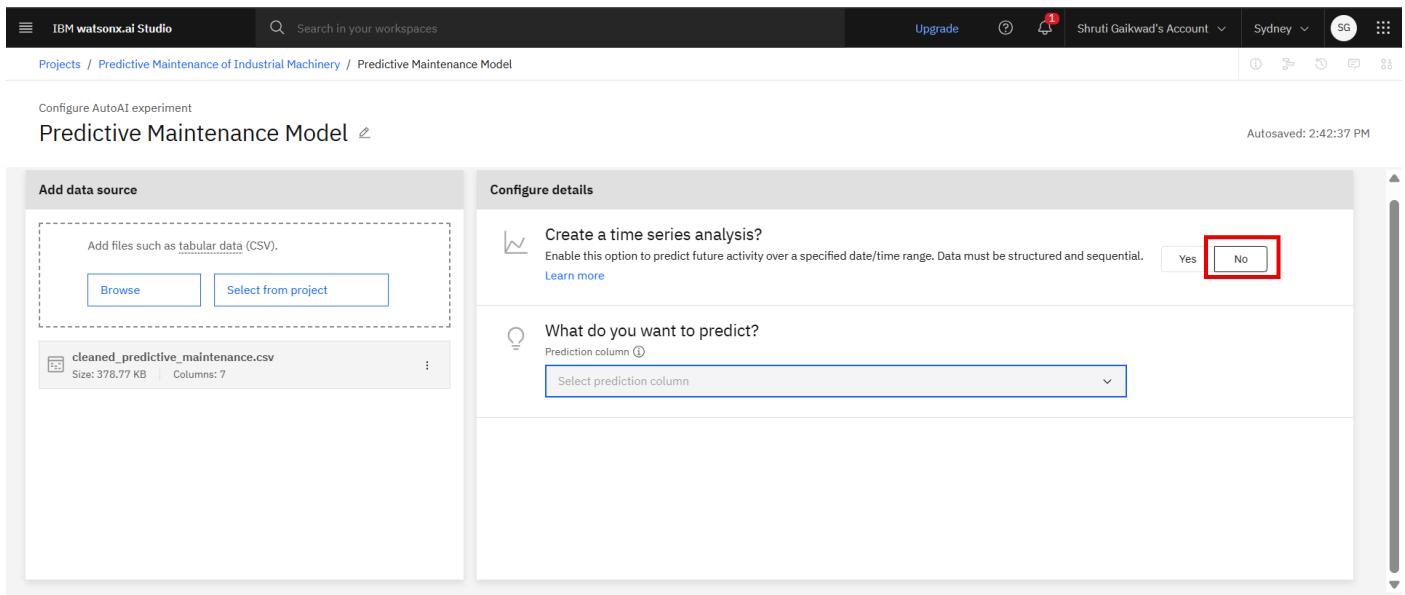
## 📁 Upload Dataset :

## Step 24 : Click Browse and upload the Kaggle file (predictive\_maintenance.csv)

The screenshot shows the 'Add data source' step in the AutoAI experiment configuration. It features a large dashed box for dropping files, a character icon, and a 'Drop data files here or browse for files to upload' instruction. Below this are 'Browse' and 'Select from project' buttons, with the 'Browse' button highlighted with a red box.

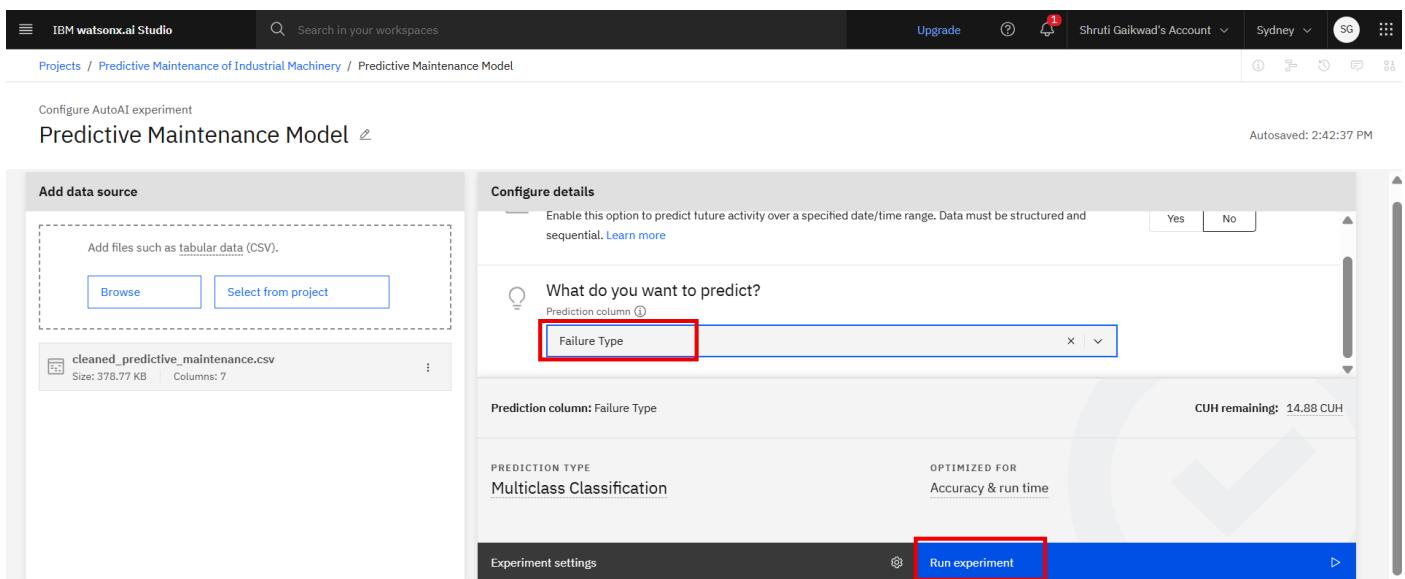
## Set Up Model Training :

Step 25 : Is this a time series? → Select No



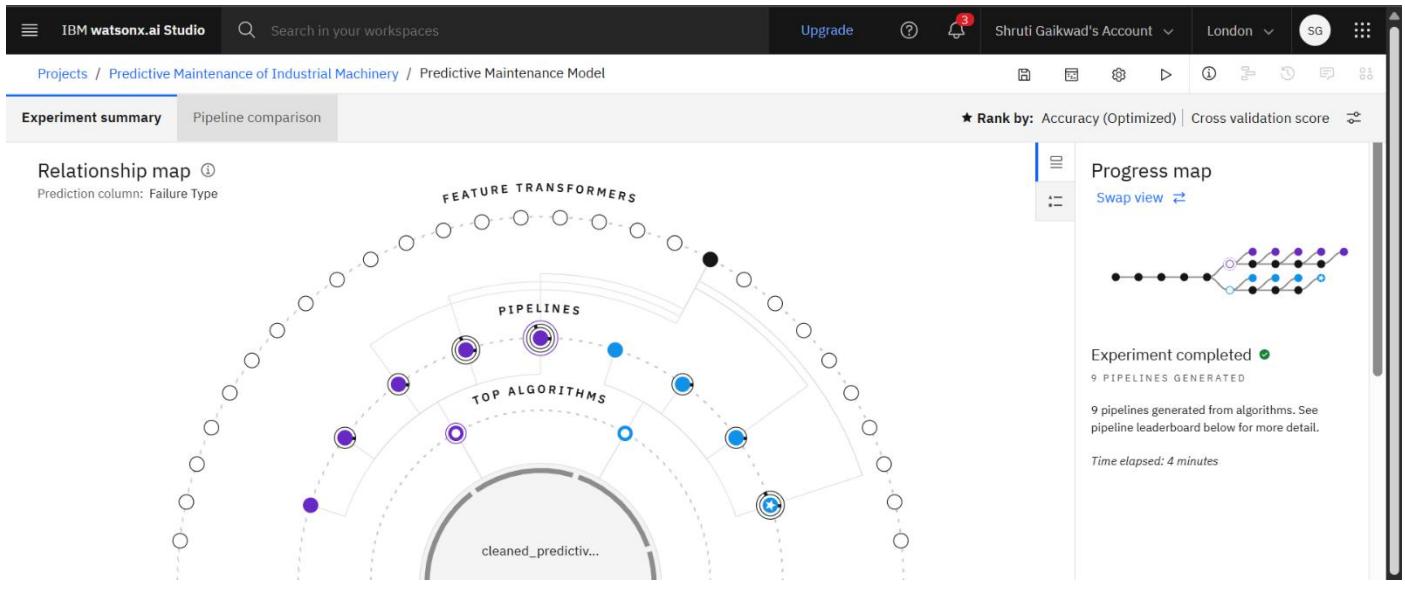
The screenshot shows the 'Configure details' section of the AutoAI experiment setup. Under 'Create a time series analysis?', there is a question and a toggle switch. The 'No' button is highlighted with a red box.

Step 26 : What do you want to predict? → Choose Failure Type as the target column and click Run Experiment

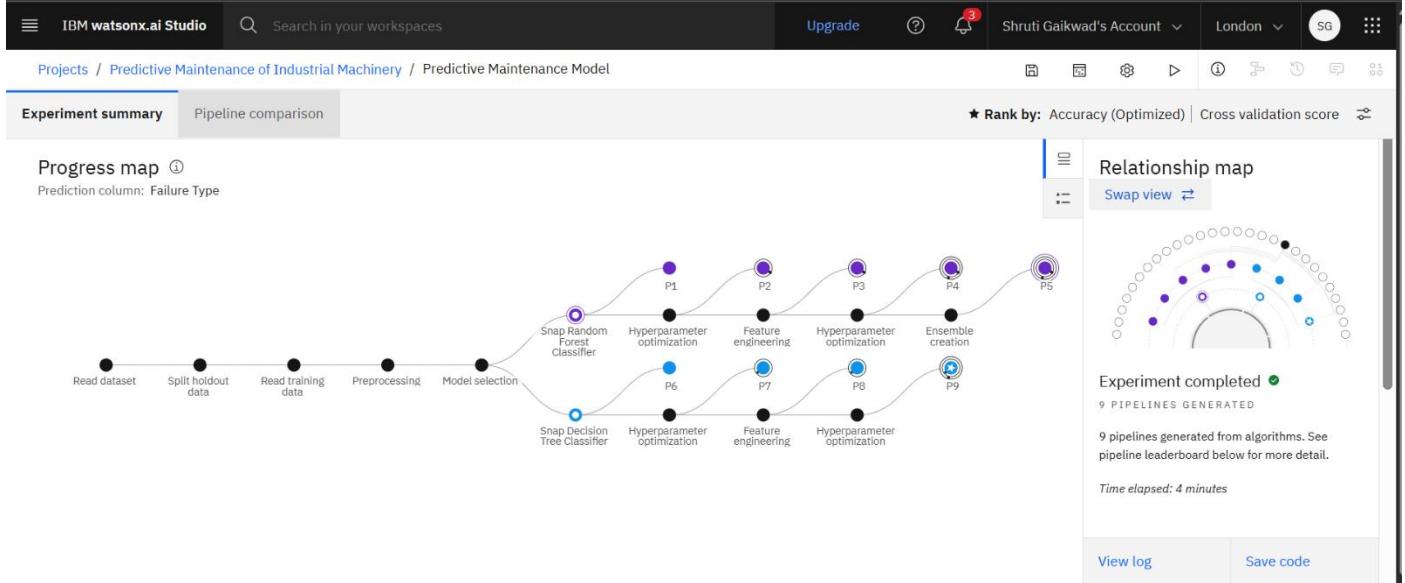


The screenshot shows the 'Configure details' section with the 'Prediction column' dropdown set to 'Failure Type'. The 'Run experiment' button at the bottom is highlighted with a red box.

## Relationship Map :

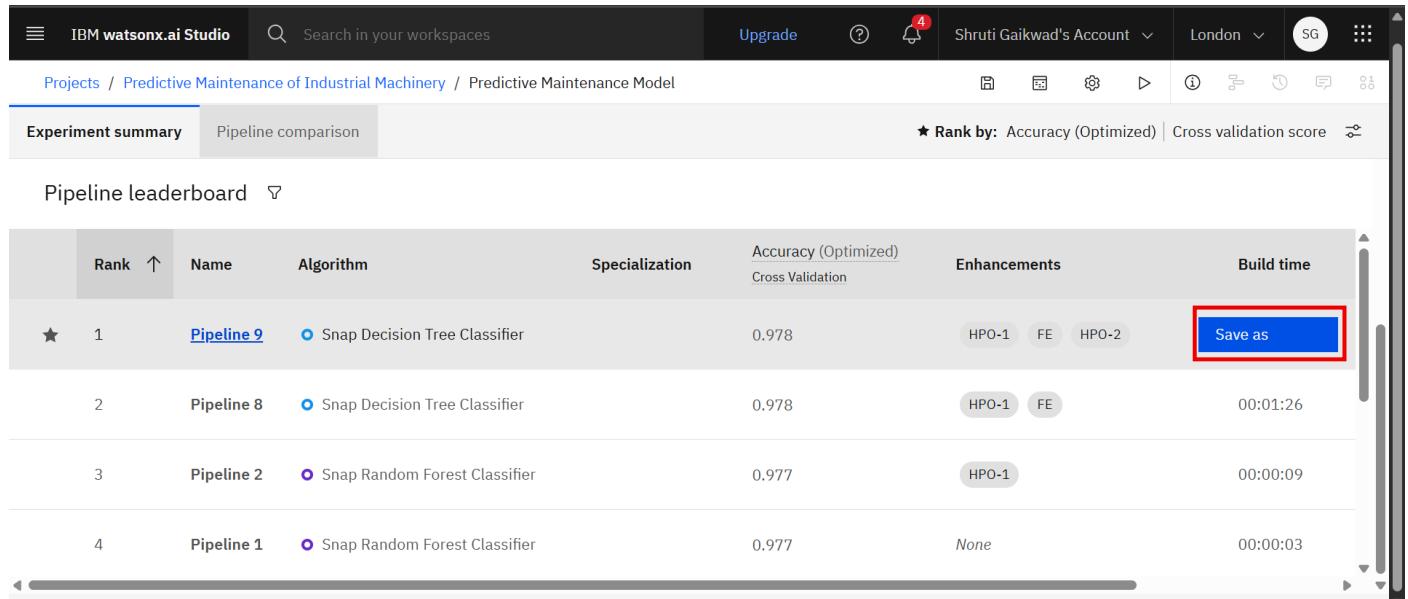


## Progress Map :



## 🏆 Save Best Model :

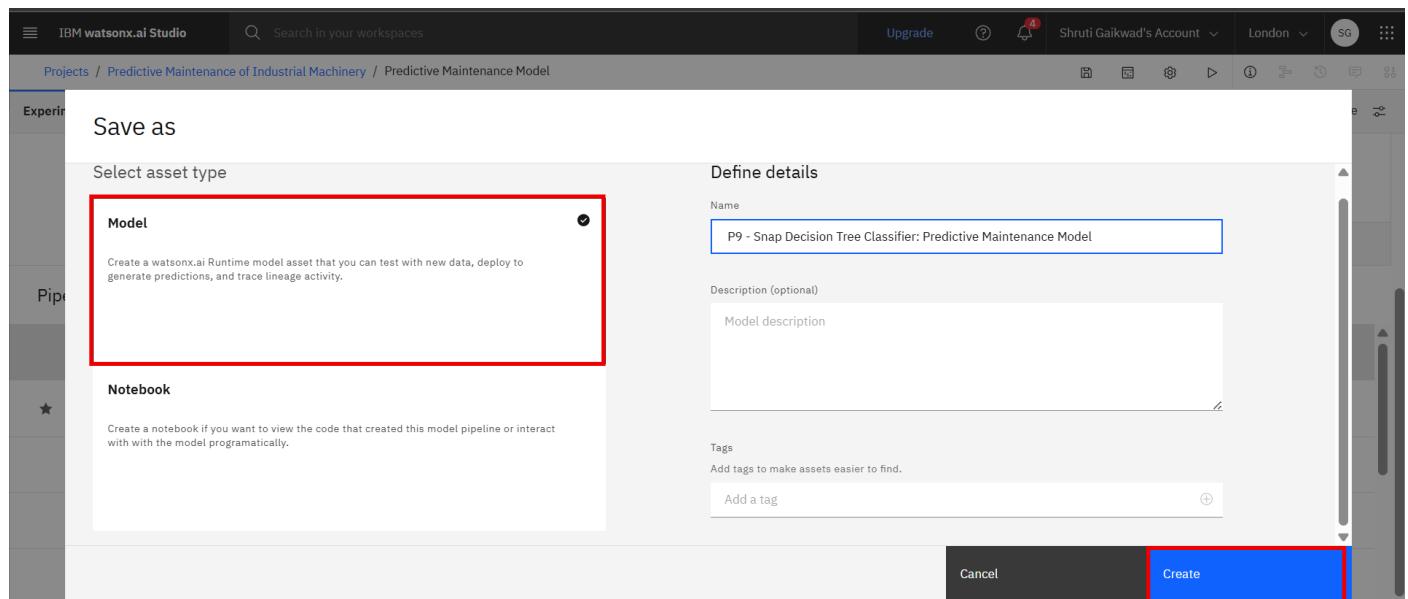
Step 27 : After model runs, check the Pipeline leaderboard Select the top-ranked model Click Save As



The screenshot shows the Pipeline leaderboard in IBM Watsonx.ai Studio. Pipeline 9 is ranked 1st, using a Snap Decision Tree Classifier with an accuracy of 0.978. It has enhancements HPO-1, FE, and HPO-2. The 'Save as' button is highlighted with a red box.

Rank	Name	Algorithm	Specialization	Accuracy (Optimized) Cross Validation	Enhancements	Build time
1	Pipeline 9	Snap Decision Tree Classifier		0.978	HPO-1, FE, HPO-2	Save as
2	Pipeline 8	Snap Decision Tree Classifier		0.978	HPO-1, FE	00:01:26
3	Pipeline 2	Snap Random Forest Classifier		0.977	HPO-1	00:00:09
4	Pipeline 1	Snap Random Forest Classifier		0.977	None	00:00:03

Step 28 : Choose Model and Click Create



The screenshot shows the 'Save as' dialog in IBM Watsonx.ai Studio. The 'Model' option is selected and highlighted with a red box. The 'Create' button is also highlighted with a red box.

Select asset type

- Model** (highlighted with a red box)
- Notebook

Define details

Name: P9 - Snap Decision Tree Classifier: Predictive Maintenance Model

Description (optional): Model description

Tags: Add tags to make assets easier to find.

Cancel Create

## 💡 Deploy the Model :

### Step 29 : After saving, click View in Project

IBM Watsonx.ai Studio

Search in your workspaces

Projects / Predictive Maintenance of Industrial Machinery / Predictive Maintenance Model

Experiment summary Pipeline comparison

\* Rank by:

Saved Model successfully.  
P9 - Snap Decision Tree Classifier:  
Predictive Maintenance Model was successfully saved to Predictive Maintenance of Industrial Machinery.

View in project

Pipeline leaderboard

Rank ↑	Name	Algorithm	Specialization	Accuracy (Optimized) Cross Validation	Enhancements	Build time
1	Pipeline 9	Snap Decision Tree Classifier		0.978	HPO-1 FE HPO-2	00:00:04
2	Pipeline 8	Snap Decision Tree Classifier		0.978	HPO-1 FE	00:01:26
3	Pipeline 2	Snap Random Forest Classifier		0.977	HPO-1	00:00:09
4	Pipeline 1	Snap Random Forest Classifier		0.977	None	00:00:03

### Step 30 : Click Promote to Space

IBM Watsonx.ai Studio

Search in your workspaces

Projects / ... / P9 - Snap Decision Tree Classifier: Predictive Maintenance Model

Promote to space

About this asset

Input (1)

Column ↑	Type
Air temperature [K]	double
Process temperature [K]	double
Rotational speed [rpm]	double
Tool wear [min]	double
Torque [Nm]	double
Type	other

Name  
P9 - Snap Decision Tree Classifier: Predictive Maintenance Model

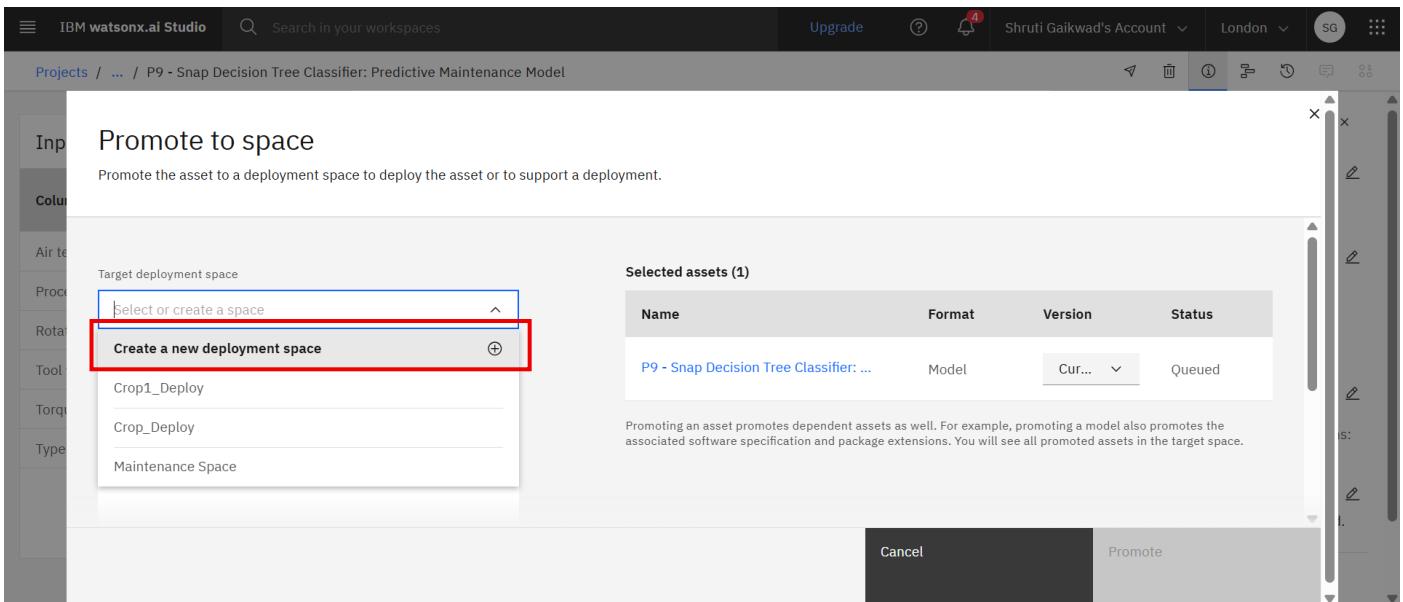
Description  
No description provided.

Asset Details  
Type: wml-hybrid\_0.1  
Model ID: 68daa182-153a-40...  
Software specification:  
hybrid\_0.1  
Hybrid pipeline software specifications:  
autoai-kb\_rt24.1-py3.11

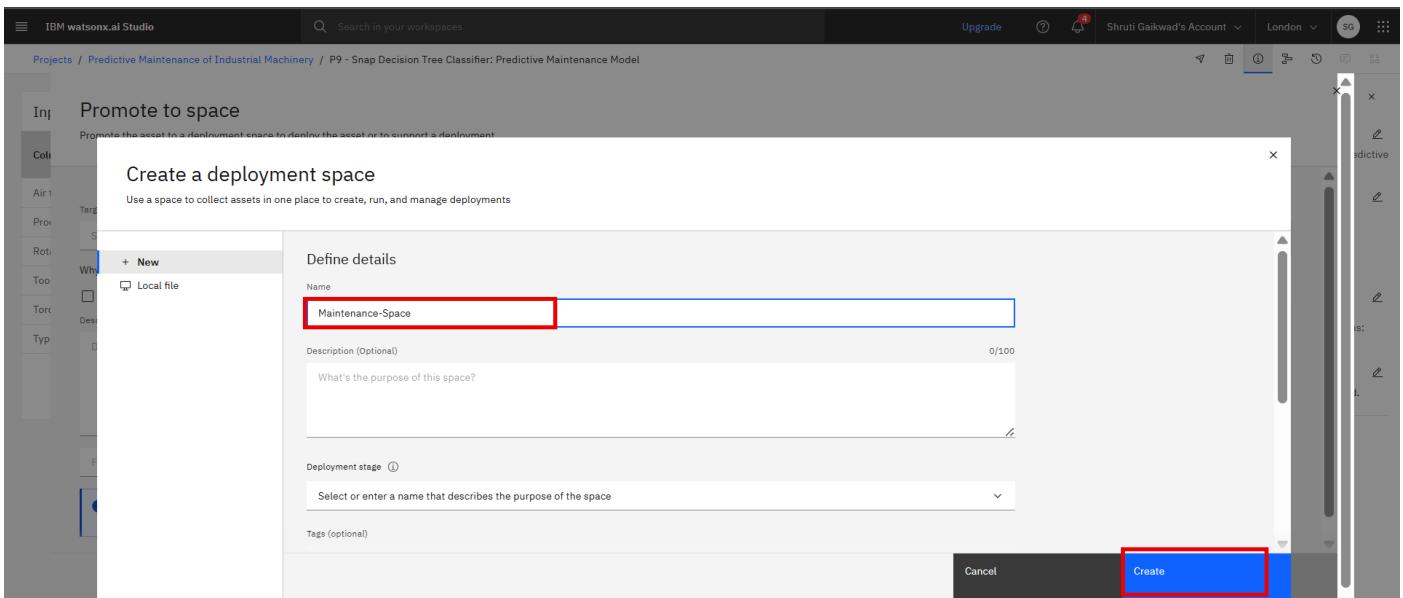
Tags  
Add tags to make assets easier to find.

Last modified  
1 minute ago by Shruti Gaikwad

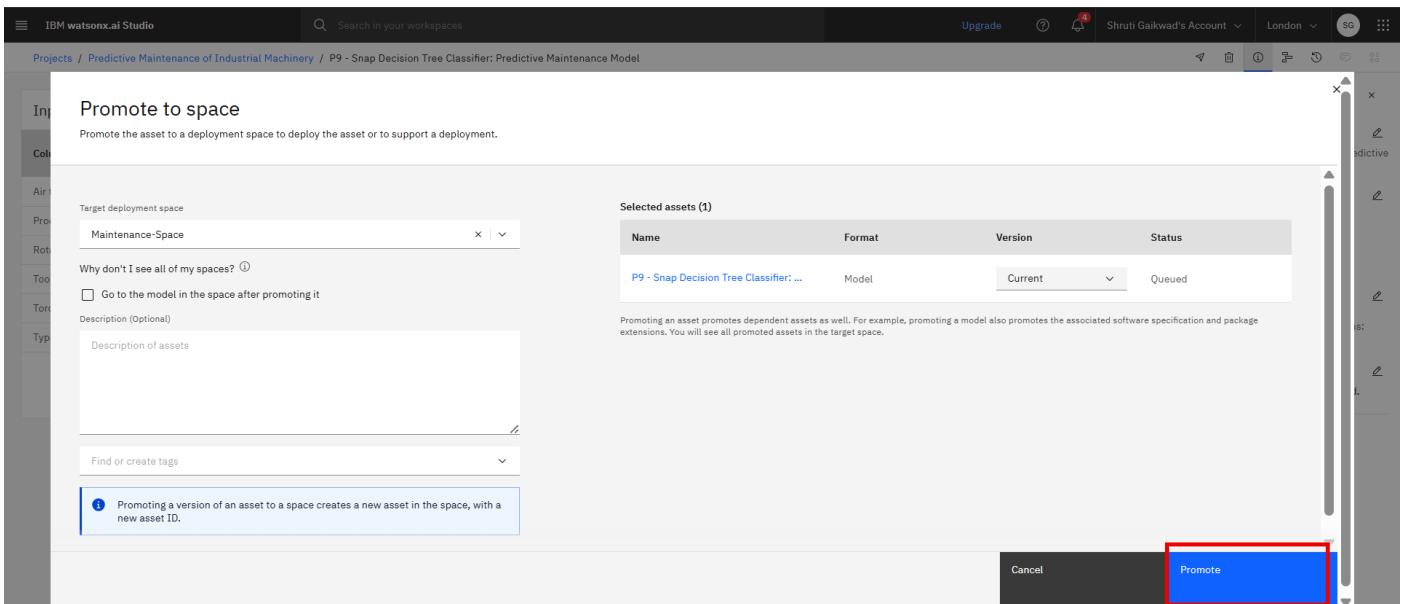
## Step 31 : Click dropdown → Create new deployment space



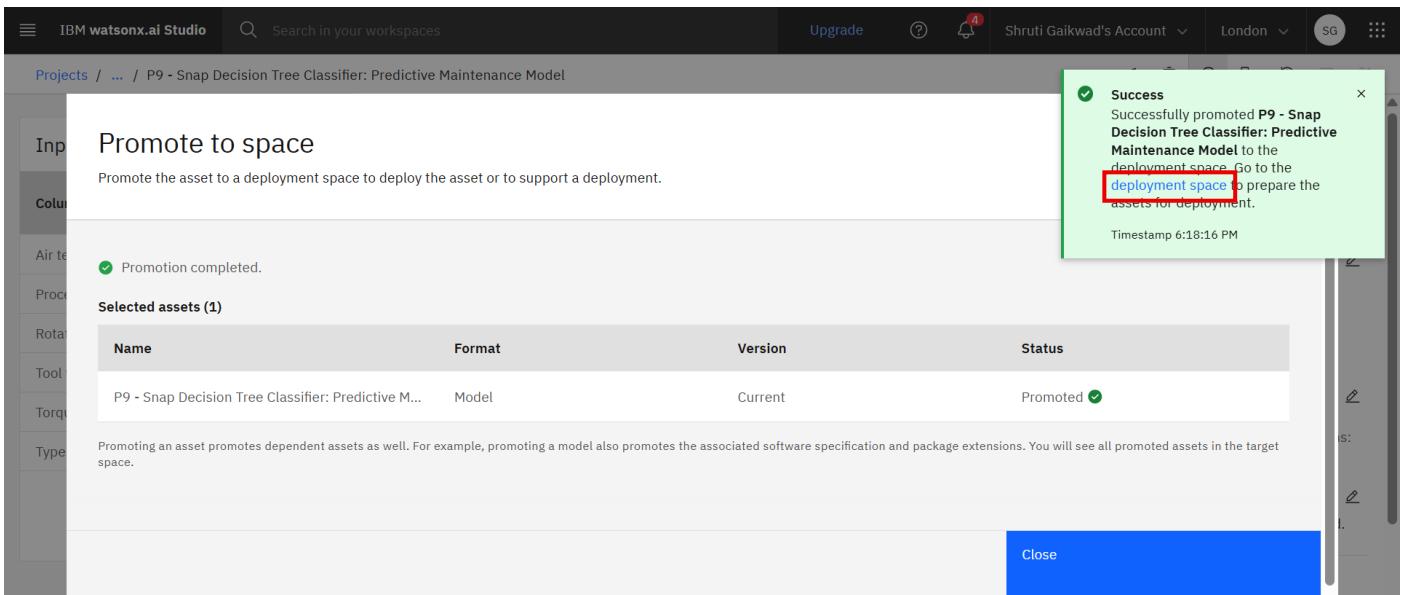
## Step 32 : Give name and Click Create



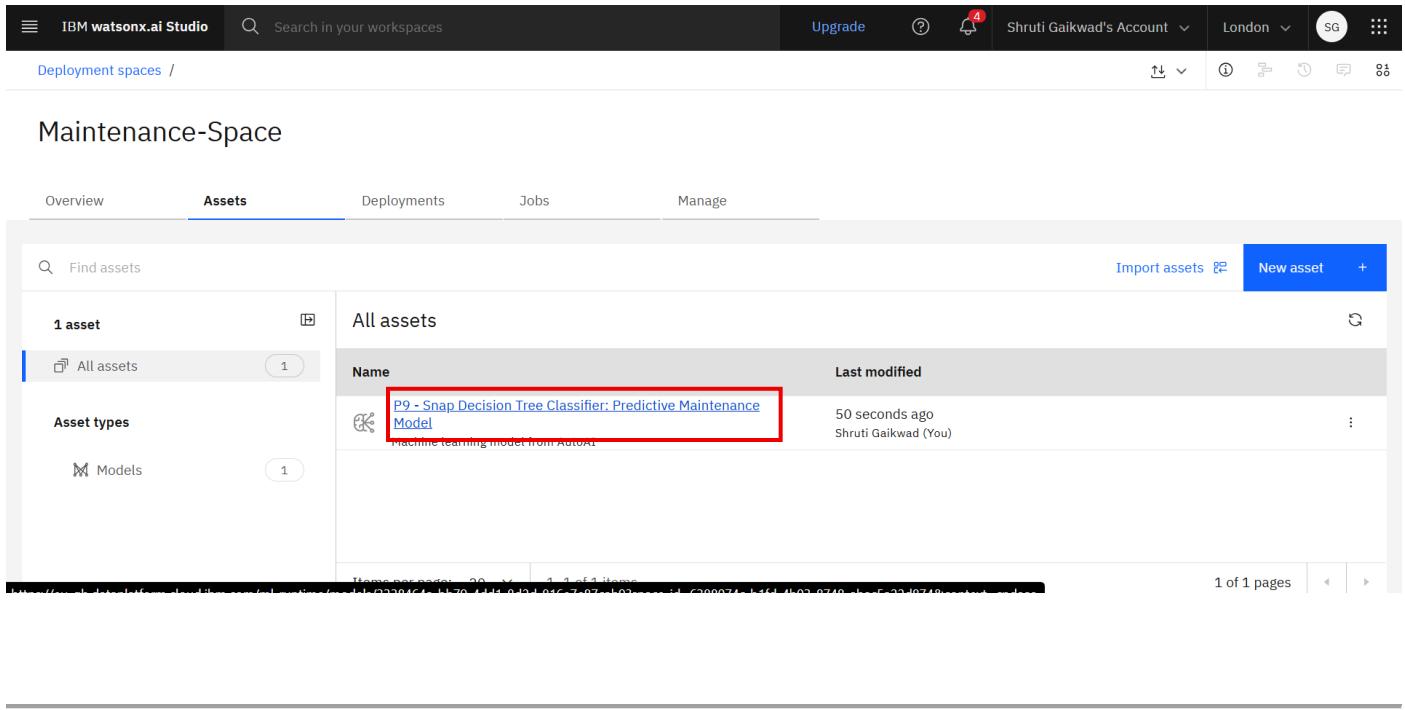
## Step 33 : Click Promote



## Step 34 : click Go to deployment space

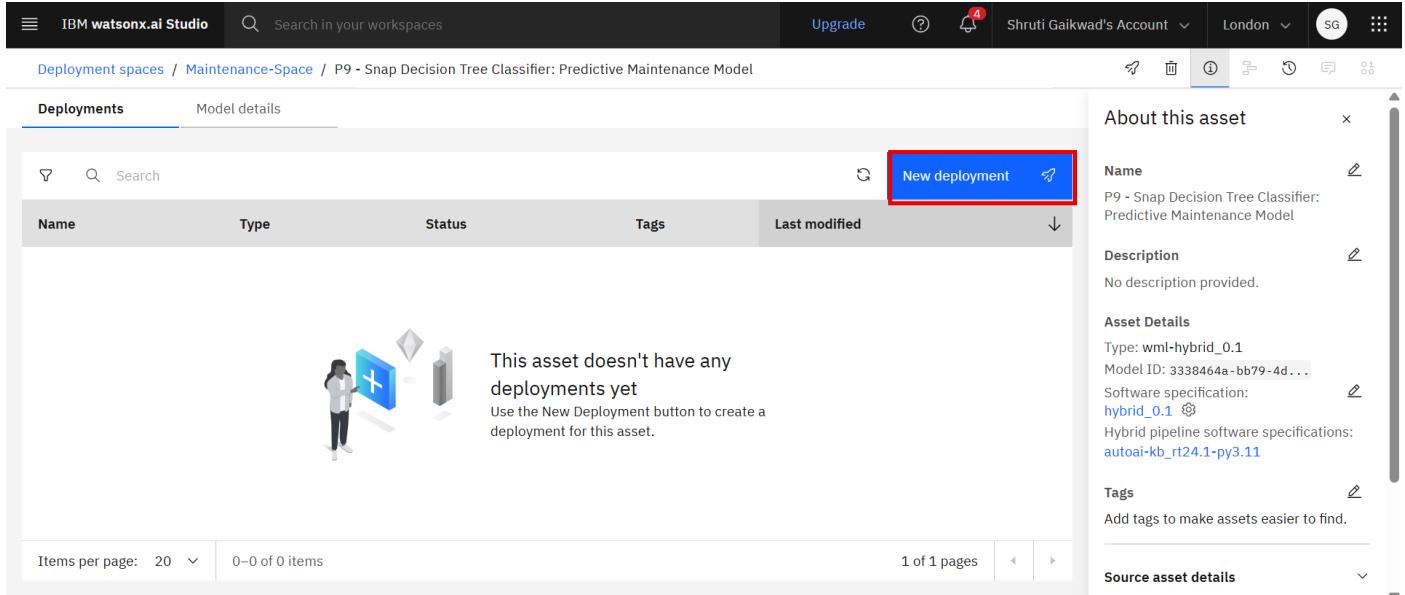


## Step 35 : Click model name



The screenshot shows the 'Assets' tab in the IBM Watsonx.ai Studio interface. On the left, there's a sidebar with '1 asset' (All assets) and 'Asset types' (Models). The main area is titled 'All assets' and lists one item: 'P9 - Snap Decision Tree Classifier: Predictive Maintenance Model'. This item is highlighted with a red box. The details shown are 'Name: P9 - Snap Decision Tree Classifier: Predictive Maintenance Model' and 'Last modified: 50 seconds ago by Shruti Gaikwad (You)'. At the top right, there are buttons for 'Import assets' and 'New asset'.

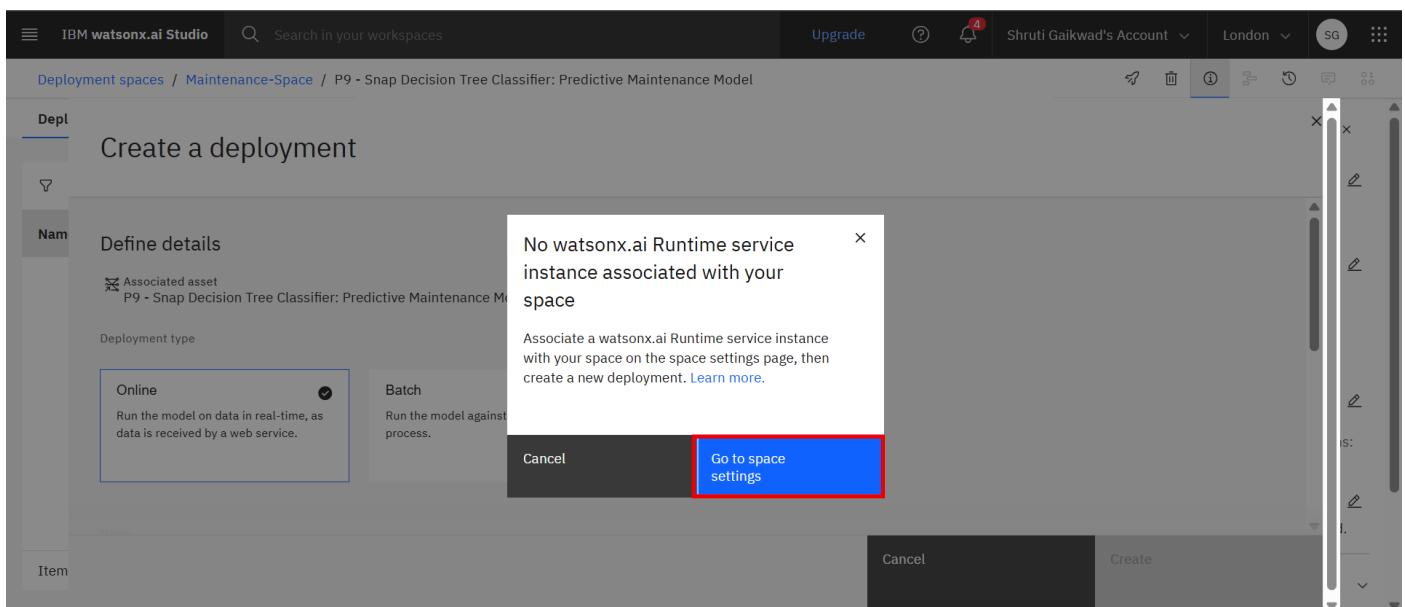
## Step 36 : Click New deployment



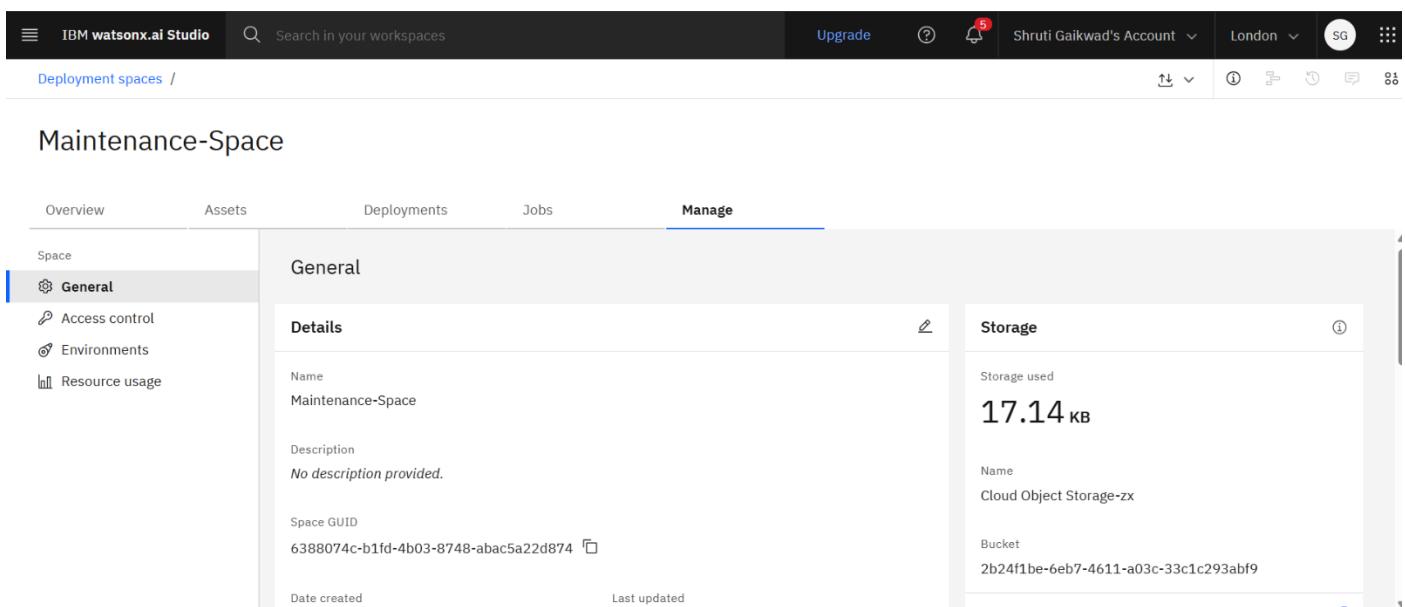
The screenshot shows the 'Deployments' tab in the IBM Watsonx.ai Studio interface. The main area displays a table with columns: Name, Type, Status, Tags, and Last modified. A message in the center says 'This asset doesn't have any deployments yet. Use the New Deployment button to create a deployment for this asset.' To the right, there's a panel titled 'About this asset' with details like Name ('P9 - Snap Decision Tree Classifier: Predictive Maintenance Model'), Description ('No description provided.'), Asset Details ('Type: wml-hybrid\_0.1', 'Model ID: 3338464a-bb79-4d...', 'Software specification: hybrid\_0.1'), and Tags ('Add tags to make assets easier to find').

## Associate Runtime in Deployment Space :

### Step 37 : Click Go to space settings



### Step 38 : Scroll down to Watsonx.ai Runtime section



The screenshot shows the 'Maintenance-Space' page in IBM Watsonx.ai Studio. The 'Manage' tab is selected. On the left, there's a sidebar with 'Space' and 'General' sections. The 'General' section contains 'Access control', 'Environments', and 'Resource usage'. The main area has tabs for 'Overview', 'Assets', 'Deployments', 'Jobs', and 'Manage'. Under the 'Manage' tab, there are two main sections: 'General' and 'Storage'. The 'General' section shows 'Name: Maintenance-Space' and 'Description: No description provided.'. The 'Storage' section shows 'Storage used: 17.14 kB' and details about a Cloud Object Storage bucket named 'Cloud Object Storage-zx' with a bucket ID '2b24f1be-6eb7-4611-a03c-33c1c293abf9'.

## Step 39 : Click open menu

The screenshot shows the IBM Watsonx.ai Studio interface. On the left, there's a sidebar with sections like Overview, Assets, Deployments, Jobs, and Manage. Under Manage, the General tab is selected. The main area displays basic space information: Date created (Aug 7, 2025, 6:17 PM), Last updated (Aug 7, 2025, 6:17 PM), Stage (Not provided), Stage type (Pre-production), and Tags (No tags are set to this space). Below this is a Controls section with a Cloud Pak for Data platform option and a Switch platform button. On the right, a modal window titled 'watsonx.ai Runtime service...' is open. It has tabs for 'Manage in IBM Cloud' and 'watsonx.ai Runtime service...'. The runtime service tab is active, showing a dropdown menu with the placeholder 'Select or create an instance'. This dropdown is highlighted with a red box. At the bottom of the modal are 'Cancel' and 'Save' buttons, with 'Save' being greyed out.

## Step 40 : Select watsonx.ai Runtime Service

This screenshot is similar to the previous one but shows the 'watsonx.ai Runtime service...' dialog with a different selection. The 'Select or create an instance' dropdown now contains an entry: 'watsonx.ai Runtime-tj', which is also highlighted with a red box. The rest of the interface is identical to the previous screenshot, showing the general space details and the controls section.

## Step 41 : Click Save

Maintenance-Space

Overview Assets Deployments Jobs Manage

Date created Aug 7, 2025, 6:17 PM by Shruti Gaikwad (You)

Last updated Aug 7, 2025, 6:17 PM

Stage Not provided Stage type Pre-production

Tags No tags are set to this space.

Controls

Cloud Pak for Data platform Switch platform

Manage in IBM Cloud

watsonx.ai Runtime service... Cancel Save

watsonx.ai Runtime-tj

## Deploy Model Online :

## Step 42 : Go to Assets Tab, Click Model name

Maintenance-Space

Overview Assets Deployments Jobs Manage

Find assets Import assets New asset +

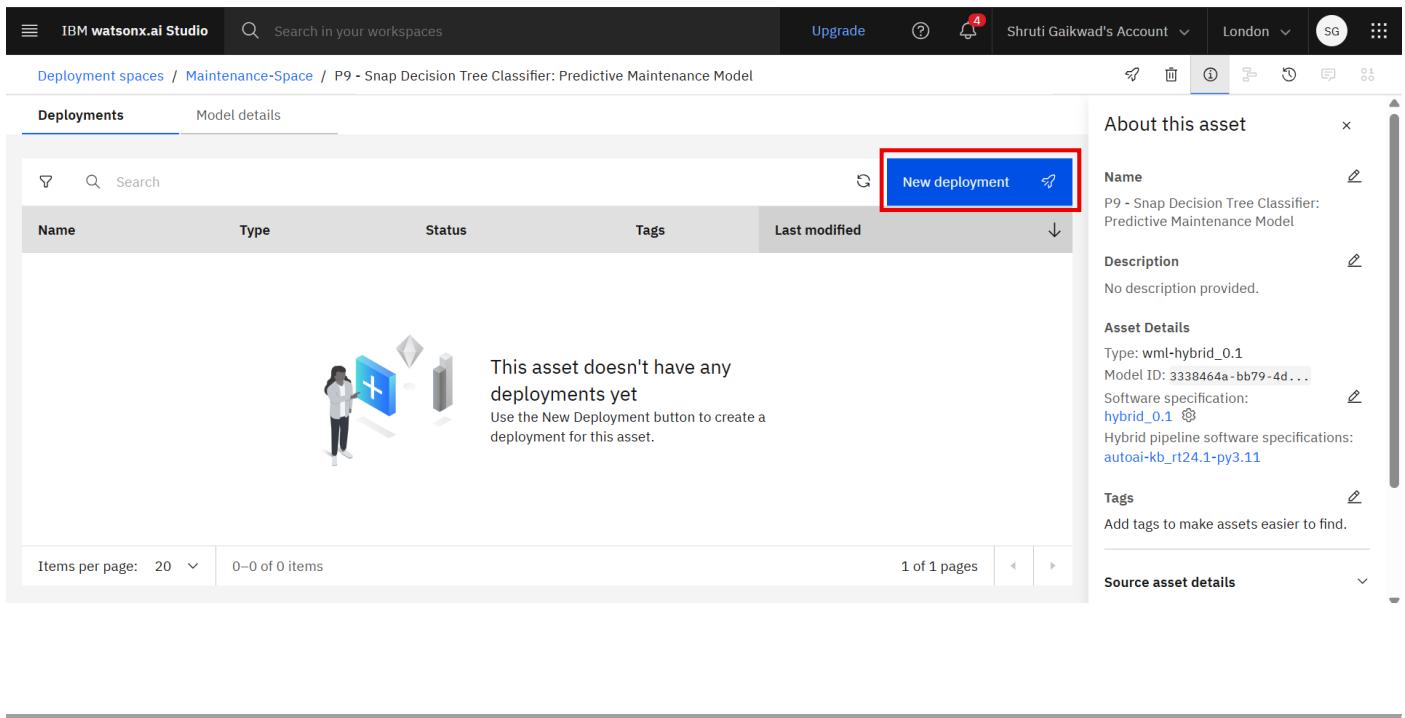
1 asset All assets

All assets

Name	Last modified
P9 - Snap Decision Tree Classifier: Predictive Maintenance Model Machine learning model from AutoAI	8 minutes ago Shruti Gaikwad (You)

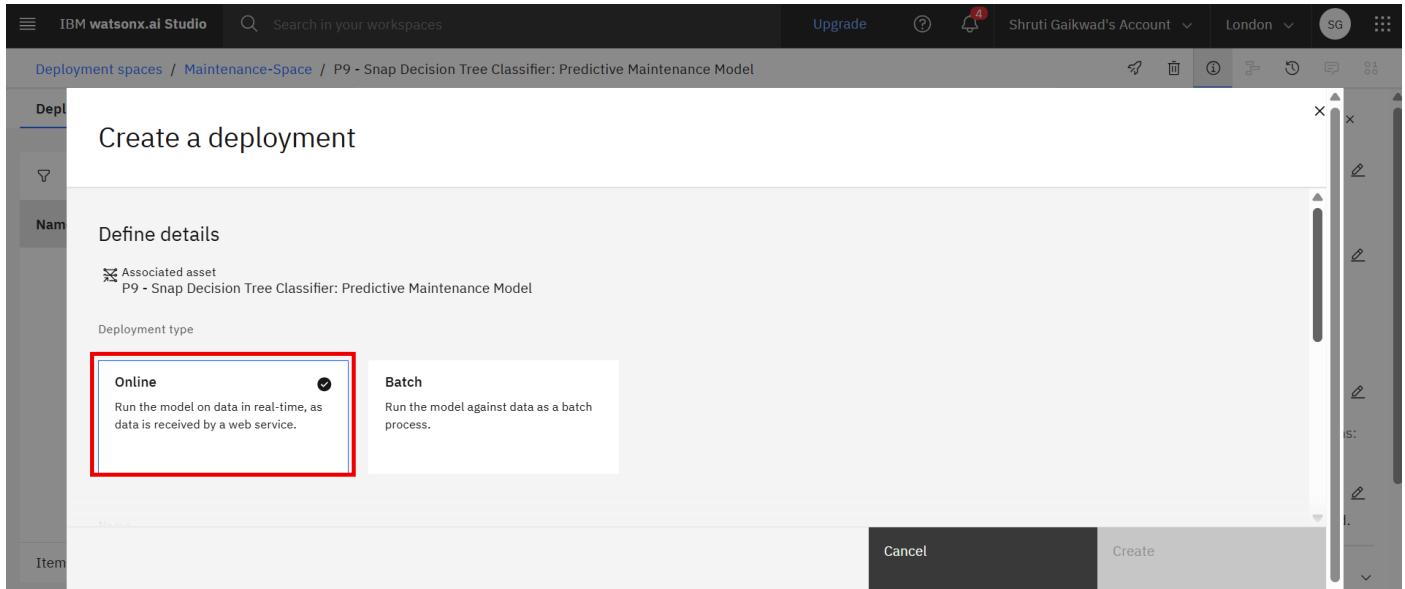
ibm.com/ml-runtime/models/3338464a-bb79-4dd1-8d2d-816e7e87cab9?sg...

## Step 43 : Click New deployment



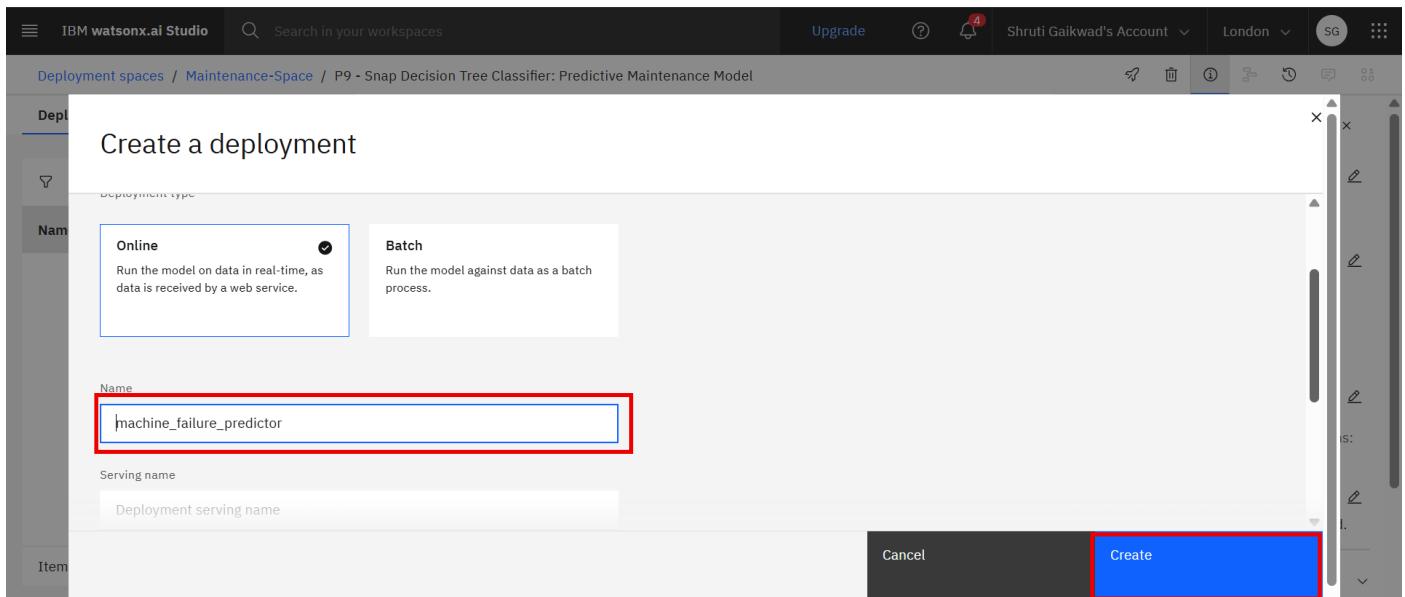
The screenshot shows the 'IBM Watsonx.ai Studio' interface. The top navigation bar includes 'IBM Watsonx.ai Studio', a search bar, 'Upgrade', a notifications icon with 4 notifications, 'Shruti Gaikwad's Account', 'London', and a user profile icon. The main content area is titled 'Deployment spaces / Maintenance-Space / P9 - Snap Decision Tree Classifier: Predictive Maintenance Model'. On the left, there are tabs for 'Deployments' (which is selected) and 'Model details'. The main pane displays a table with columns: Name, Type, Status, Tags, and Last modified. Below the table, a message states: 'This asset doesn't have any deployments yet. Use the New Deployment button to create a deployment for this asset.' At the bottom, there are pagination controls: 'Items per page: 20', '0–0 of 0 items', '1 of 1 pages', and navigation arrows. To the right, there is an 'About this asset' panel with sections for 'Name', 'Description', 'Asset Details', 'Tags', and 'Source asset details'. The 'New deployment' button is highlighted with a red box.

## Step 44 : Choose Online Deployment



The screenshot shows the 'Create a deployment' dialog box. The title is 'Create a deployment'. Under 'Define details', there is a checked checkbox for 'Associated asset' which points to 'P9 - Snap Decision Tree Classifier: Predictive Maintenance Model'. Below this, there are two options for 'Deployment type': 'Online' and 'Batch'. The 'Online' option is selected and highlighted with a red box. The 'Batch' option is described as 'Run the model against data as a batch process.' At the bottom, there are 'Cancel' and 'Create' buttons.

## Step 45 : Scroll down, give name and click Create



## Test the Model :

## Step 46 : Click on the deployment name

The screenshot shows the 'Deployments' page. A table lists one deployment entry:

Name	Type	Status	Tags	Last modified
machine_failure_predictor	Online	Deployed	Add tags +	29 seconds ago Shruti Gaikwad (You)

The 'About this asset' panel on the right provides details about the deployment:

- Name:** P9 - Snap Decision Tree Classifier: Predictive Maintenance Model
- Description:** No description provided.
- Asset Details:** Type: wml-hybrid\_0.1, Model ID: 3338464a-bb79-4d..., Software specification: hybrid\_0.1, Hybrid pipeline software specifications: autoai-kb\_rt24.1-py3.11
- Tags:** Add tags to make assets easier to find.

## Step 47 : Click Test

The screenshot shows the IBM Watson AI Studio interface. At the top, there's a navigation bar with 'IBM watsonx.ai Studio', a search bar, and various account and workspace options. Below the navigation bar, the main content area displays a deployment named 'machine\_failure\_predictor' which is 'Deployed' and 'Online'. There are two tabs: 'API reference' (selected) and 'Test' (highlighted with a red box). The 'API reference' section contains sections for 'Endpoints for scoring' (private and public), and 'Code snippets' for various languages like CURL, Java, JavaScript, Python, and Scala. The 'Test' section is currently empty. On the right side, there's a sidebar titled 'About this deployment' with details such as Name (machine\_failure\_predictor), Description (No description provided), Deployment Details (Deployment ID: ac1684a9-0f5a-423a-ad76-922a6a9b190c, Serving name: No serving name, Software specification: hybrid\_0.1, Hybrid pipeline software specifications: autoai-kb\_r124.1-py3.11), Copies (1), Tags (Add tags to make assets easier to find), and Associated asset.

## Step 48 : Enter Data Manually, Click Predict

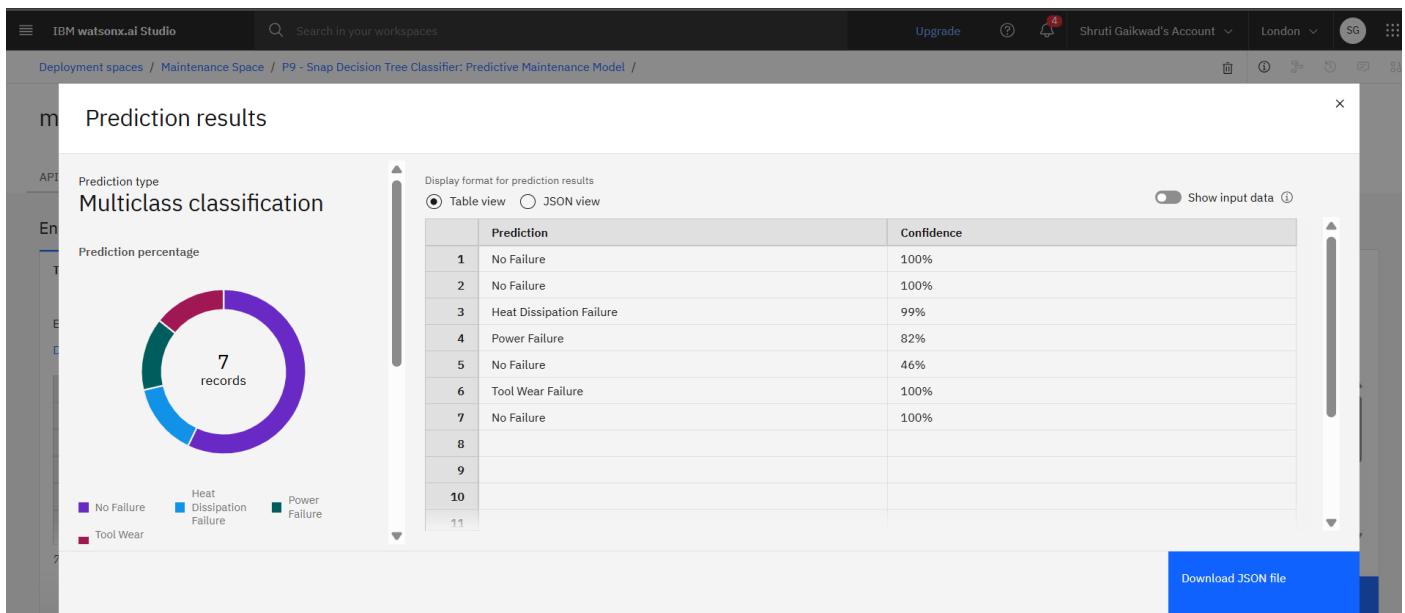
The screenshot shows the same IBM Watson AI Studio interface as before, but with the 'Test' tab selected. In the 'Enter input data' section, there's a table for entering data manually or using a CSV file. A red box highlights the first seven rows of the table, which contain the following data:

	Type (other)	Air temperature [K] (double)	Process temperature [K] (double)	Rotational speed [rpm] (double)	Torque [Nm] (double)	Tool wear [min] (double)
1	M	302.2	310.6	1570	34.6	163
2	L	301.8	309.7	1598	30.4	124
3	L	302	309.9	1308	57.6	197
4	M	303.6	312.8	2659	11.4	26
5	L	304	312.9	1363	62.5	200
6	L	304.4	313.7	1509	35	205
7	H	301.5	310.7	1394	46.7	130

A callout box with the text 'Here, I have Enter Data' points to the table. A red box also highlights the 'Predict' button at the bottom right of the input area.

## Prediction Results :

- Prediction Percentage :



- Confidence Level Distribution :

