



IBM Developer SKILLS NETWORK

Estimated time needed: 40 minutes

In this lab you will explore Watson Studio

Objectives - After completing this lab, you will be able to:

- Use Watson Studio service
- Create project in Watson Studio
- Add an interactive python notebook to a project in Watson Studio

Pre-requisite

You need an IBM Cloud account to create a project in Watson Studio. If you don't have an account created already, click and open this [link](#) and follow the instructions, to create an IBM Cloud account.

Exercise - Create a project on Watson Studio

If you have not created a Watson service before proceed with Task 1, otherwise go to Task 2

Task 1: For New Users (with no Watson service):

1. [Click here](#) to go to the IBM Cloud Watson Studio page. To create a Watson service, choose a plan you want to use, click **Create**. In the image below, the *Lite* plan has been chosen.

IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage Lavanya Sunde...

Catalog / Services /

Watson Studio

Author: IBM • Date of last update: 12/06/2020 • Docs

Create About

Select a region

Select a region

Dallas

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or region: [United States](#)

Plan	Features	Pricing
Lite	1 authorized user 50 capacity unit-hours monthly limit Environment = # of capacity units required per hour • 1 vCPU + 4 GB RAM = 0.5 • 2 vCPU + 8 GB RAM = 1 • 4 vCPU + 16 GB RAM = 2 • Decision Optimization = Environment + 5	Free

The Lite plan for Watson Studio offers everything you need to become a better data scientist or domain expert in a collaborative environment.

Lite plan services are deleted after 30 days of inactivity.

Create

Add to estimate

View terms

FEEDBACK

2. On the Watson Studio page, click on **Get Started**.

IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage Lavanya Sunde...

Resource list /

Watson Studio-qo

Active Add tags

Details Actions...

Manage

Plan

Watson Studio

Welcome to Watson Studio. Let's get started!

Get Started

[Documentation](#)

From getting started to how to's — see what's available.

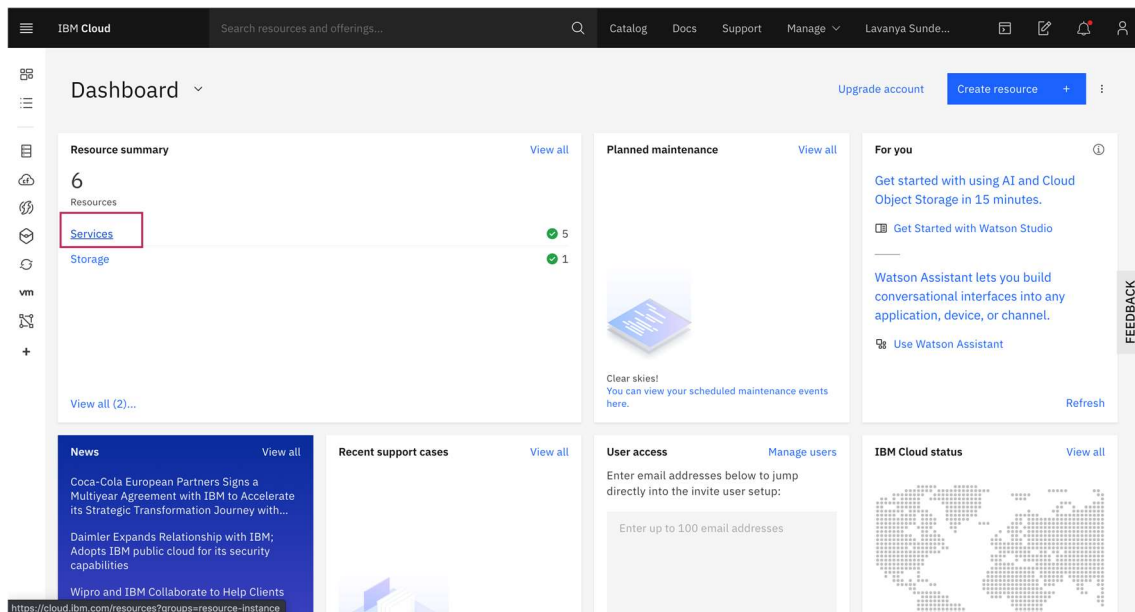
[Community](#)

Check out our tutorials, articles, along with sample notebooks and data sets you can use to get going.

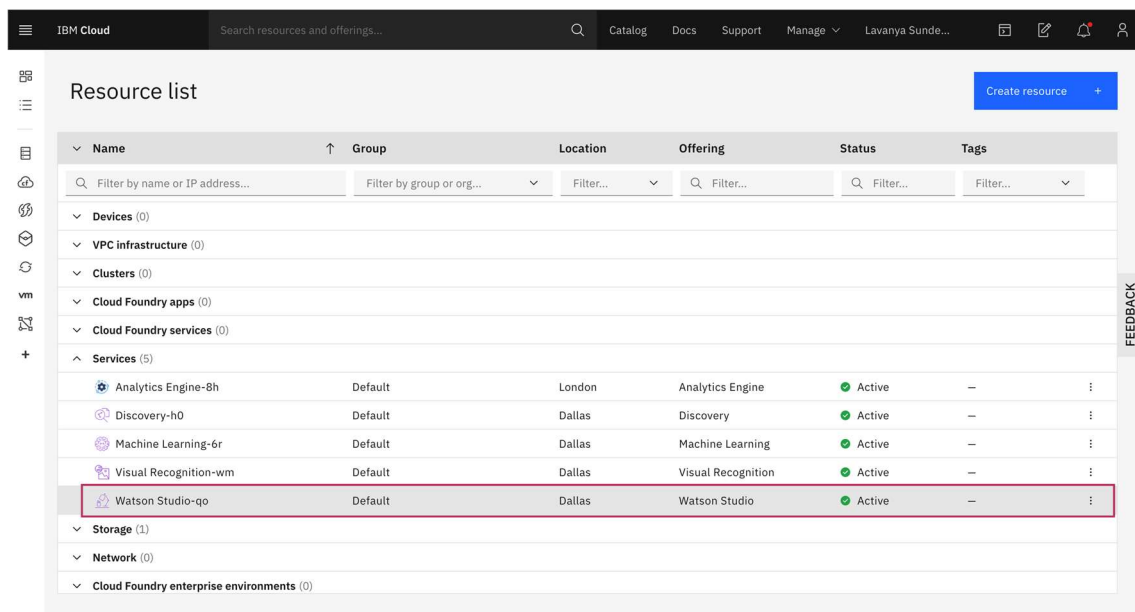
FEEDBACK

Task 2: For Existing Users (who already have Watson Service):

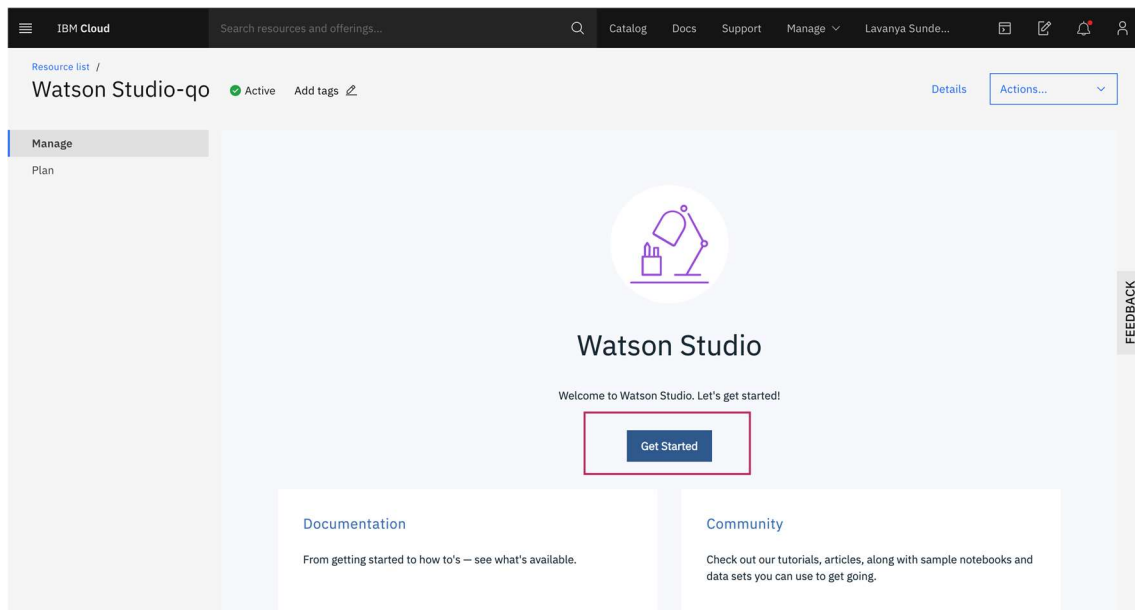
1. Go to the IBM Cloud Dashboard and click Services.



2. When you click on Services, all your existing services will be shown in the list. Click the Watson Studio service you created:

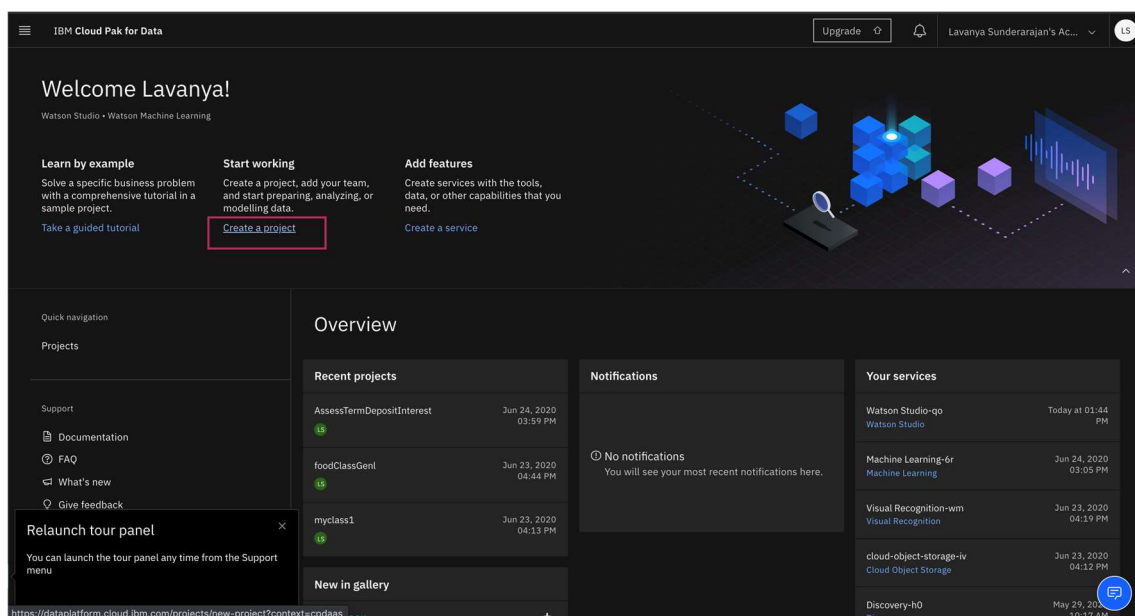


3. On the Watson Studio page, click on **Get Started**.



Task 3: Creating a Project

1. Click on **Create a project**




2. On the Create a project page, click **Create an empty project**

[← Back](#)

Create a project

Choose whether to create an empty project or to preload your project with data and analytical assets. Add collaborators and data, and then choose the right tools to accomplish your goals. Add services as necessary.




Create an empty project

Add the data you want to prepare, analyze, or model. Choose tools based on how you want to work: write code, create a flow on a graphical canvas, or automatically build models.

NEW AutoAI experiment tool: Fully automated approach to building a classification or reg...

USE TO

Prepare and visualize data
Analyze data in notebooks
Train models



Create a project from a sample or file

Get started fast by loading existing assets. Choose a project file from your system, or choose a curated sample project.

USE TO

Learn by example
Build on existing work
Run tutorials

<https://dataplatform.cloud.ibm.com/projects/new-project?context=cpdaas#>

3. Provide a **Project Name** and **Description**, as shown below:

New project

Define project details

Name

Python Basics for Data Science Project

Description

This is the Python Basics for Data Science Project.

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project will include integration with Cloud Object Storage for storing project assets.

Define storage

① Select storage service

[Add](#)

Add an object storage instance and then return to this page and click Refresh.

② Refresh

[Cancel](#) [Create](#)

4. You must also create storage for the project. Click **Add**

New project

Define project details

Name

Project name

Description

Project description

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project will include integration with Cloud Object Storage for storing project assets.

Define storage

- Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.
- Refresh

Cancel

Create

5. On the Cloud Object Storage page, scroll down and then click **Create**.

IBM Watson Studio

Upgrade + ⓘ

Help Feedback Support

Cloud Object Storage

Existing New

Cloud Object Storage

IBM Cloud Object Storage is a highly scalable cloud storage service, designed for high durability, resiliency and security. Store, manage and access your data via our self-service portal and RESTful APIs. Connect applications directly to Cloud Object Storage use other IBM Cloud Services with your data.

Features

Storage for the IBM Cloud

IBM Cloud Object Storage provides unstructured data storage for cloud applications. Libraries and SDKs support a common set of S3 API functions for connecting new applications to scalable cloud storage and integrating your data into other services on the IBM Cloud Platform as well as IBM Watson services. IBM Cloud Object Storage is available with Regional, Cross Region and single site resiliency options worldwide.

Built-in Aspera high-speed transfer

With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

Storage Classes and Archive Policy

Choose storage classes based on your usage patterns for active, less-active, and cold workloads with Standard, Vault, and Cold Vault respectively. Use Flex class for dynamic data access with usage patterns that are hard to predict. For rarely used data that requires long-term retention, simply set an Archive policy with our existing storage-class tiers allowing you to reduce costs even further with our lowest priced Archive storage.

Access and Key Management

IBM Identity and Access Management (IAM) policies allow for granular access control at the bucket level using role-based policies. Key Protect support allows customers to have their own managed encryption keys for higher level data security.

Pricing Plan: Monthly Process shown above reflect the: **United States**

PLAN	FEATURES	PRICING
<input checked="" type="radio"/> Lite	1 COS Service Instance Storage up to 25 GB/mo. Up to 20,000 GET requests/mo. Up to 2,000 PUT requests/mo. Up to Data Retrieval 10 GB/mo. Up to 5GB Public Outbound Applies to aggregate total across all storage bucket classes	Free
<input type="radio"/> Standard	There is no minimum fee, so you pay only for what you use.	Expand each section to view details

The Lite service plan for Cloud Object Storage includes Regional and Cross Regional resiliency, flexible data classes, and built in security.

Cancel

Create

6. In the Confirm Creation box, click **Confirm**.



Confirm Creation

Plan

Lite



Resource group

Default



Service name

cloud-object-storage-ai

Cancel

Confirm

7. On the New project page, note that the storage has been added, and then click Create.

IBM Watson Studio

Upgrade

New project

Define project details

Name

Python Basics for Data Science Project

Description

This is the Python Basics for Data Science Project.

Choose project options

☐ Restrict who can be a collaborator

Project will include integration with Cloud Object Storage for storing project assets.

Storage

cloud-object-storage-1c

Cancel Create

Task4: Adding a Notebook to the Project:

1. You need to add a Notebook to your project. Click Add to project.

IBM Watson Studio

Upgrade

My Projects / Python Basics for Data Science Pt...

Launch IDE

Add to project

Python Basics for Data Science Project

Last Updated: 28 Oct, 2019

[Readme](#)

0 Assets

1 Collaborators

Date created
28 Oct, 2019

Description
This is the Python Basics for Data Science Project.

Storage
Cloud Object Storage
0 Byte used

Collaborators
View all (1)
Admin

Recent activity

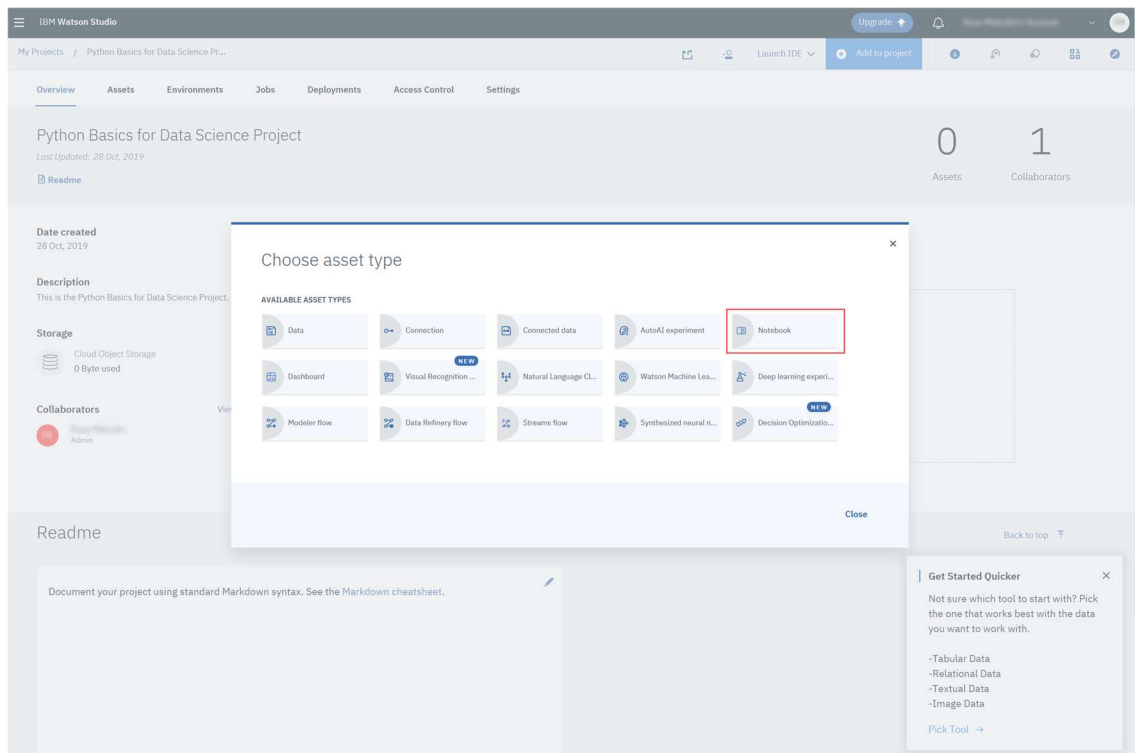
Alerts related to this project will show here when the project is active.

Readme

Document your project using standard Markdown syntax. See the Markdown cheatsheet.

Back to top

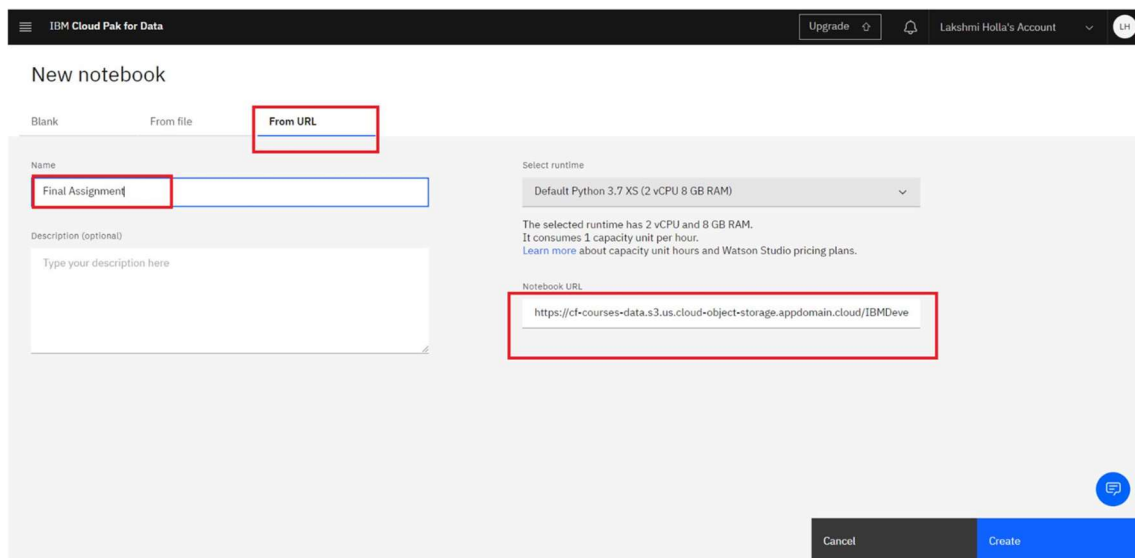
2. In the list of asset types, click Notebook:



3. On the New Notebook page, enter a name for the notebook, and then click **From URL**.

Copy this [link](#).

4. Paste it into the **Notebook URL** box, and then click **Create Notebook**.



You will see this Notebook:

Introduction to Pandas in Python

Estimated time needed: 15 minutes

Objectives

After completing this lab you will be able to:

- Use Pandas to access and view data

Table of Contents

- [About the Dataset](#)
- [Introduction of Pandas](#)
- [Viewing Data and Accessing Data](#)
- [Quiz on DataFrame](#)

Estimated time needed: 15 min

Once you complete your notebook you will have to share it. Select the icon on the top right marked in red in the image below, a dialogue box should open. Select the option *all content excluding sensitive code cells*. Share it on the Social Network platform of your choice.

Author(s)

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Other Contributor(s)

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Changelog

Date	Version	Changed by	Change Description
2020-11-18	2.1	Malika Singla	Updated the screenshot
2020-08-25	2.0	Lavanya	Migrated Lab to Markdown and added to course repo in GitLab

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