

Setup Watson Studio



Objective

After completing this lab, you will be able to:

1. Add a Watson Studio - Lite service
2. Create a project in Watson Studio
3. Add a notebook to a project
4. Perform Project
5. Share your results

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

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

For this project, you will use your IBM Watson Studio account from the previous chapter.

Go to the IBM Cloud Watson Studio page:

[Click here](#)

You will see the screen in the figure below. Click the icon in the red box:

The screenshot shows the IBM Cloud Watson Studio 'Create' page. The page has a dark header with the IBM Cloud logo and navigation links. Below the header, there's a search bar and tabs for 'Create' and 'About'. The main content area is titled 'Select a region' and 'Select a pricing plan'. A table lists three plans: Lite, Standard v1, and Enterprise v2. The 'Lite' plan is selected, indicated by a blue checkmark. The 'Create' button is highlighted in a red box. On the right side, there's a 'Summary' panel showing details for the 'Watson Studio' service, including region, plan, and service name. At the bottom right, there's a 'FEEDBACK' button.

PLAN	FEATURES	PRICING
Lite	1 authorized user 50 capacity unit-hours monthly limit 1 free small compute environment with 1 vCPU and 4 GB RAM (does not require capacity unit-hours) 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.	Free
Standard v1	1 authorized user + unlimited viewer collaborators 50 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour	\$199.00 USD/Instance \$0.50 USD/Capacity Unit-Hour \$99.00 USD/Authorized User
Enterprise v2	5 authorized users + unlimited viewer collaborators 5,000 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour HIPAA readiness option available in Dallas Multi-Tiered	Expand each section to view details

Then click **Watson**, as shown below:

IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage

Need Help?
[Contact Support](#)
[View docs](#)

Dashboard

Resource List

Cloud Foundry

Kubernetes

OpenShift

VPC Infrastructure

Classic Infrastructure

VMware

API Management

Apple Development

Blockchain

DevOps

Functions

Integrate

Managed Solutions

Mobile

Observability

Schematics

Security

Watson

Web Apps

date: 07/18/2019

Monthly prices shown are for country or region: [United States](#)

PLAN	FEATURES	PRICING
Lite	1 authorized user 50 capacity unit-hours monthly limit 1 free small compute environment with 1 vCPU and 4 GB RAM (does not require capacity unit-hours)	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.		
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Summary

Watson Studio
Region: Dallas
Plan: Lite
Service name: Watson Studio-jr
Resource group: Default

Create

Add to estimate

[View terms](#)

Then click **Browse Services**.

IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage

Account

Watson

Overview

Starter Kits

Watson Services

Browse Services

Existing Services

Developer Resources

Documentation

SDKs

Learning Resources

Apps

Build with Watson

The AI platform for business

Build a chatbot

Create a chatbot to interact with your customers.

Get Started

Extract insights

Query the news to understand hot topics, sentiment and more.

Get Started

Convert audio into text

Convert speech in multiple languages into text.

Get Started

View all Starter Kits

Browse all Watson services

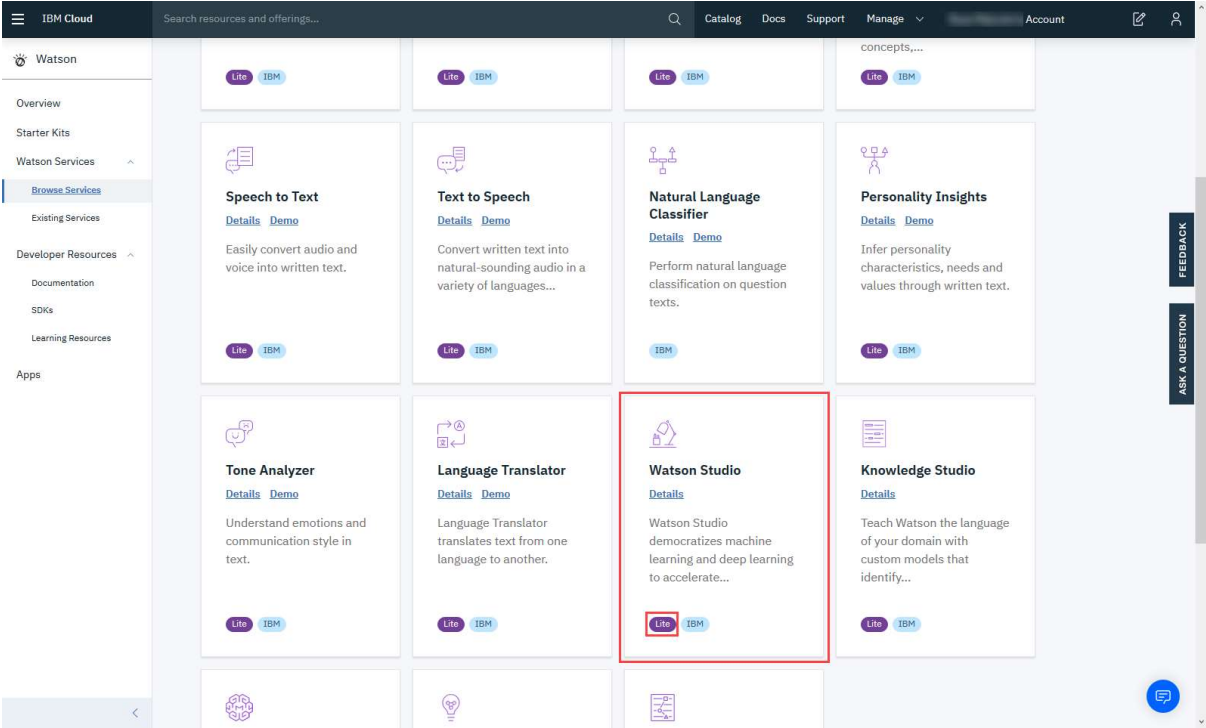
Consult with IBM

Get the most out of your IBM Cloud account by working with our consultants. Learn how to develop for the cloud, leverage Watson APIs, rearchitect an existing application, or experience the design thinking process in action.

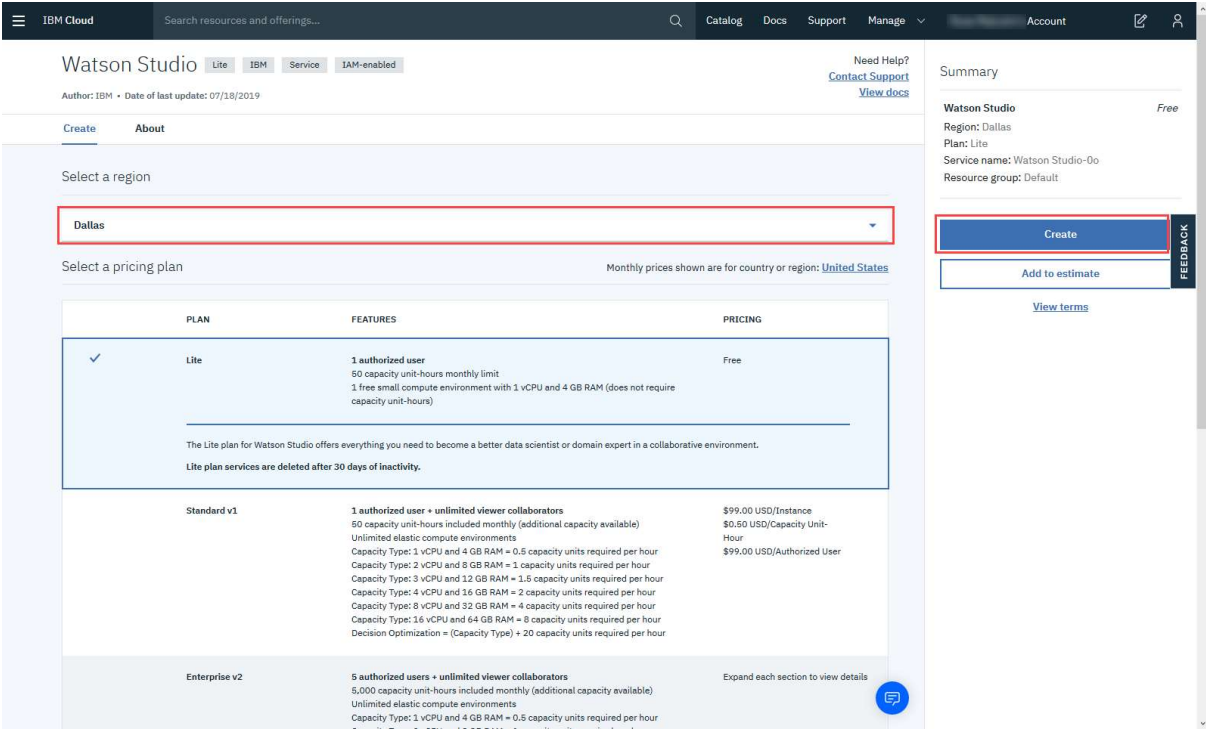
IBM Watson Studio

Collaborate to find insights fast. Visualize and manipulate data with code, graphical tools, or APIs. Develop models and neural networks with powerful algorithms and popular frameworks.

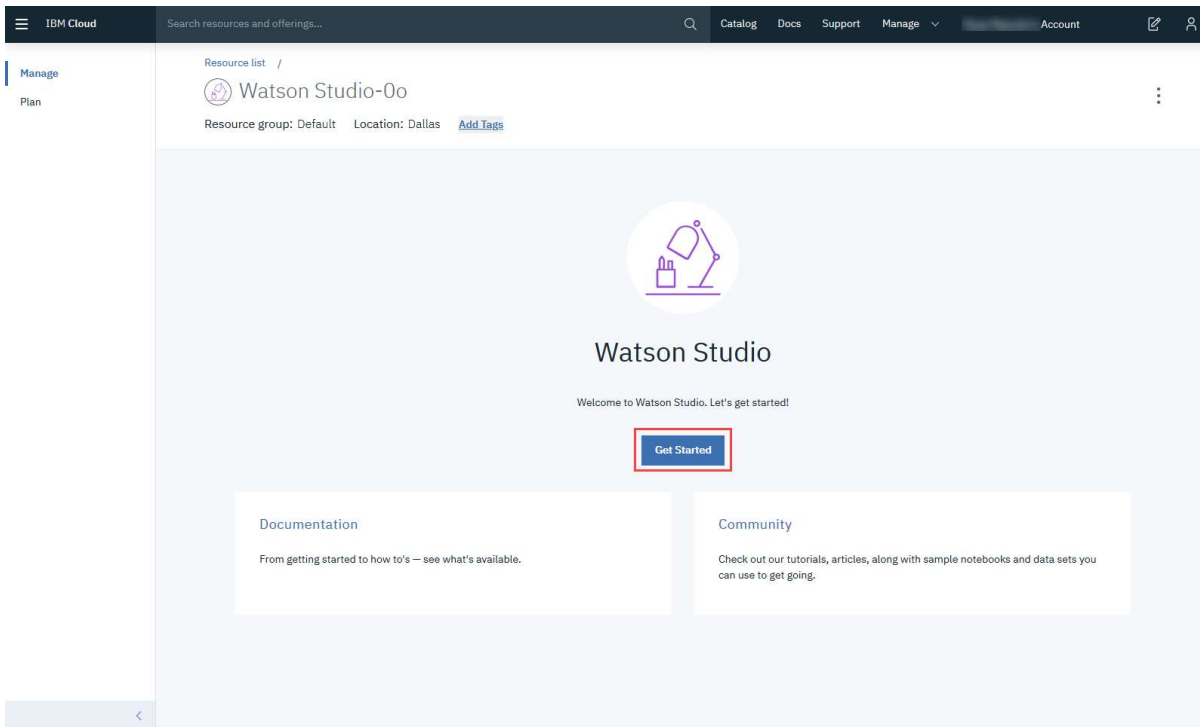
Scroll down and select **Watson Studio - Lite**.



To create a Watson service using the Lite plan, click **Create**.



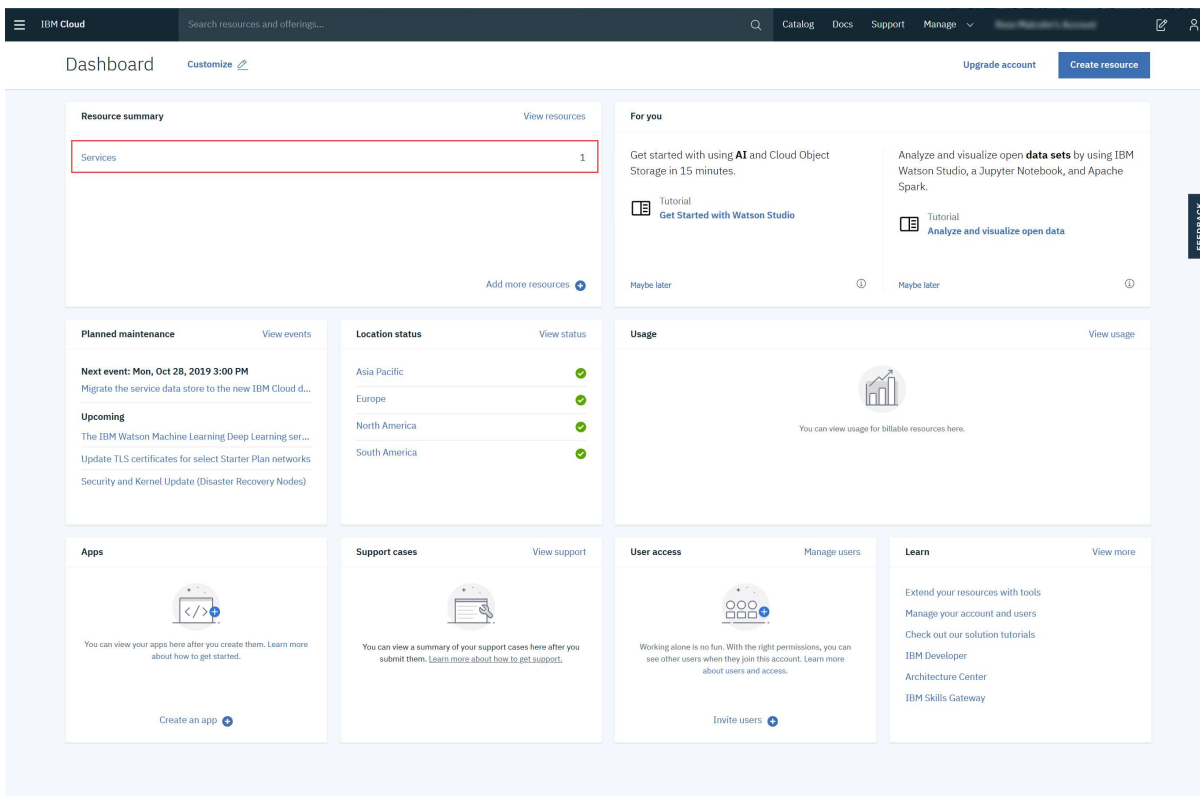
Now click **Get Started**.



After creating the service continue with Step 2.

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

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



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

IBM Cloud

Search resources and offerings...

Q

Catalog

Docs

Support

Manage

View Plan details

Resource list

Create resource

Collapse all | Expand all

Name	Group	Location	Offering	Status	Tags
Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
> Devices (0)					
> VPC Infrastructure (0)					
> Clusters (0)					
> Cloud Foundry Apps (0)					
> Cloud Foundry Services (0)					
Services (1)					
Watson Studio-0o	Default	Dallas	Watson Studio	Provisioned	— ...
> Storage (1)					
> Network (0)					
> Cloud Foundry Enterprise Environments (0)					
> Functions Namespaces (0)					
> Apps (0)					
> Developer Tools (0)					

FEEDBACK

Then click **Get Started**.

IBM Cloud

Search resources and offerings...

Q

Catalog

Docs

Support

Manage

Account

Manage

Plan

Resource list /

Watson Studio-0o

Resource group: Default Location: Dallas [Add Tags](#)

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.

Step 3: Creating a Project

Now you have to Create a project.

Click on **Create a project**:

IBM Cloud Pak for Data

Welcome Malika!

Watson Studio • Watson Machine Learning

Learn by example

Solve a specific business problem with a comprehensive tutorial in a sample project.

Take a guided tutorial

Start working

Create a project, add your team, and start preparing, analyzing, or modelling data.

Create a project

Add features

Create services with the tools, data, or other capabilities that you need.


Create a service

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 re...

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

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

about:blank

6/12

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

1 Select storage service

Add

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

2 Refresh

Cancel

Create

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

IBM Watson Studio

Upgrade

IBM Watson Studio

Cloud Object Storage

ExistingNew

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

Cancel

Create

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

about:blank

7/12

Confirm Creation

Plan

Lite

Resource group

Default

Service name

cloud-object-storage-ai

Cancel

Confirm

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

IBM Watson Studio

Upgrade

New Member Account

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-tc

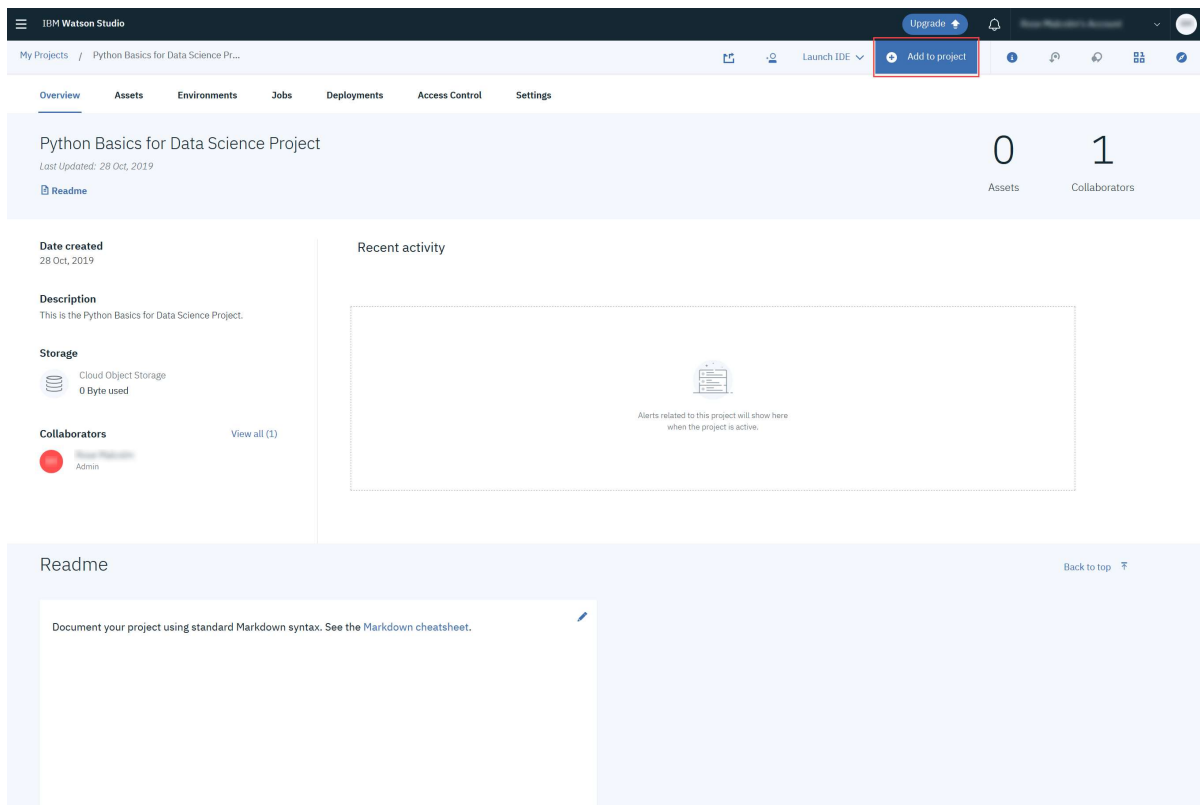
Cancel

Create

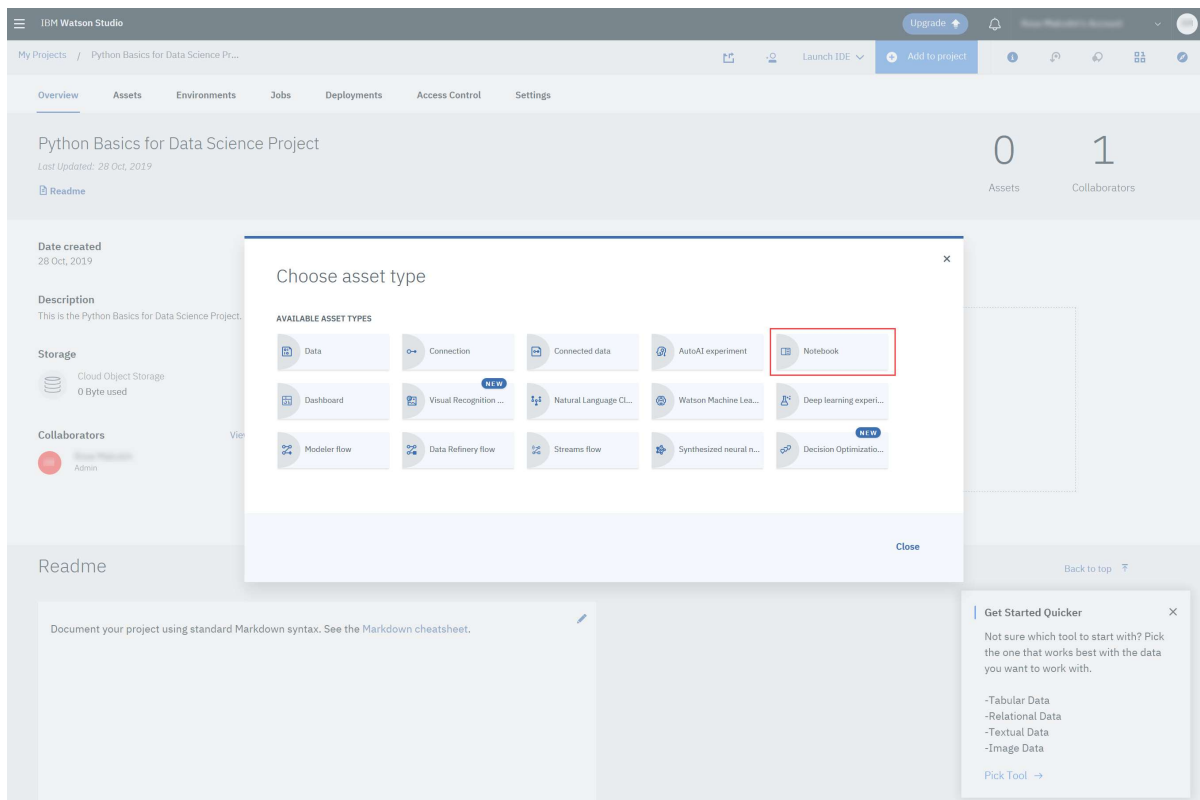
After creating the project continue with Step 3.

Step 3: Adding a Notebook to the Project:

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



In the list of asset types, click **Notebook**:



On the New Notebook page, enter a name for the notebook, and then click **From URL**.
Copy this link:

[Click here](#)

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

IBM Watson Studio

My Projects / Python Basics for Data Science Pr... / Add Notebook

New notebook

Blank From file **From URL**

Name
Lab - Loading Data and Viewing Data
4 characters remaining

Description (optional)
Type your Description here
500 characters remaining

Select runtime
Default Python 3.6 XS (2 vCPU and 8 GB RAM)
The selected runtime has 2 vCPU and 8 GB RAM and consumes 1 capacity unit per hour.
[Learn more](#) about capacity unit hours and Watson Studio pricing plans.

Notebook URL
https://cocl.us/PPY0101EN43_EDX

Cancel Create Notebook

You will see this Notebook:

IBM Watson Studio

My Projects / Python Basics for Data Science Pr... / Lab - Loading Data and Viewing D...

File Edit View Insert Cell Kernel Help

Not Trusted | Python 3.6

Simplifying AI and Machine-Learning with Watson Studio

- Get your free account and use the Lite plan forever
- No credit card and no autorenewals

[Click Here](#)

COGNITIVE CLASS

Introduction to Pandas Python

Welcome! This notebook will teach you about using `Pandas` in the Python Programming Language. By the end of this lab, you'll know how to use `Pandas` package to view and access data.

Table of Contents

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

Estimated time needed: 15 min

About the Dataset

The table has one row for each album and several columns

Add Data to Project

Hi there,

Congratulations on getting your project started!

The next step is to bring some data to start analyzing. All collaborators in the project are automatically authorized to access the data in the project. You can add data assets to your project from many sources.

[Learn How](#)

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

My Projects / Data analysis project / test

File Edit View Insert Cell Kernel Help

Not Trusted | Python 3.6


Format

Markdown

Run

Share

Share



**COGNITIVE
CLASS**

Analyzing US Economic Data and Building a Dashboard


Description

Extracting essential data from a dataset and displaying it is a necessary part of data science; therefore individuals can make correct decisions based on the data. In this assignment, you will extract some essential economic indicators from some data, you will then display these economic indicators in a Dashboard. You can then share the dashboard via an URL.

[Gross domestic product \(GDP\)](#) is a measure of the market value of all the final goods and services produced in a period. GDP is an indicator of how well the economy is doing. A drop in GDP indicates the economy is producing less; similarly an increase in GDP suggests the economy is performing better. In this lab, you will examine how changes in GDP impact the unemployment rate. You will take screen shots of every step, you will share the notebook and the URL pointing to the dashboard.

Share test

Share a read-only view of this notebook.




Share with anyone who has the link.

Cell content

☒ Only text and output

☐ All content excluding sensitive code cells


☐ All content, including code



The link always points to the most recent version of the notebook.

Permalink to view notebook

https://dataplatfom.cloud.ibm.com/analytics/notebooks/v2/de10d626-9896-4330-bfd5-8f



Share on social media

Share test

Only text and output

☒

All content excluding sensitive code cells

☐

All content, including code

i

This option allows you to exclude code cells containing sensitive data. You can hide these code cells with a specific comment line in your code. When you share the notebook, for all code cells containing this comment line the code will not be displayed. A version is saved for your notebook. The link always points to the most recent version of the notebook.

Permalink to view notebook

https://dataplatforn.cloud.ibm.com/analytics/notebooks/v2/de10d626-9896-4330-bfd5-8f

Share on social media

Sharing must be enabled before you can share on social media

Close

Author(s)

[Joseph Santarcangelo](#)

Changelog

Date	Version	Changed by	Change Description
2020-09-17	2.0	Shubham	Migrated Lab to Markdown and added to course repo in GitLab