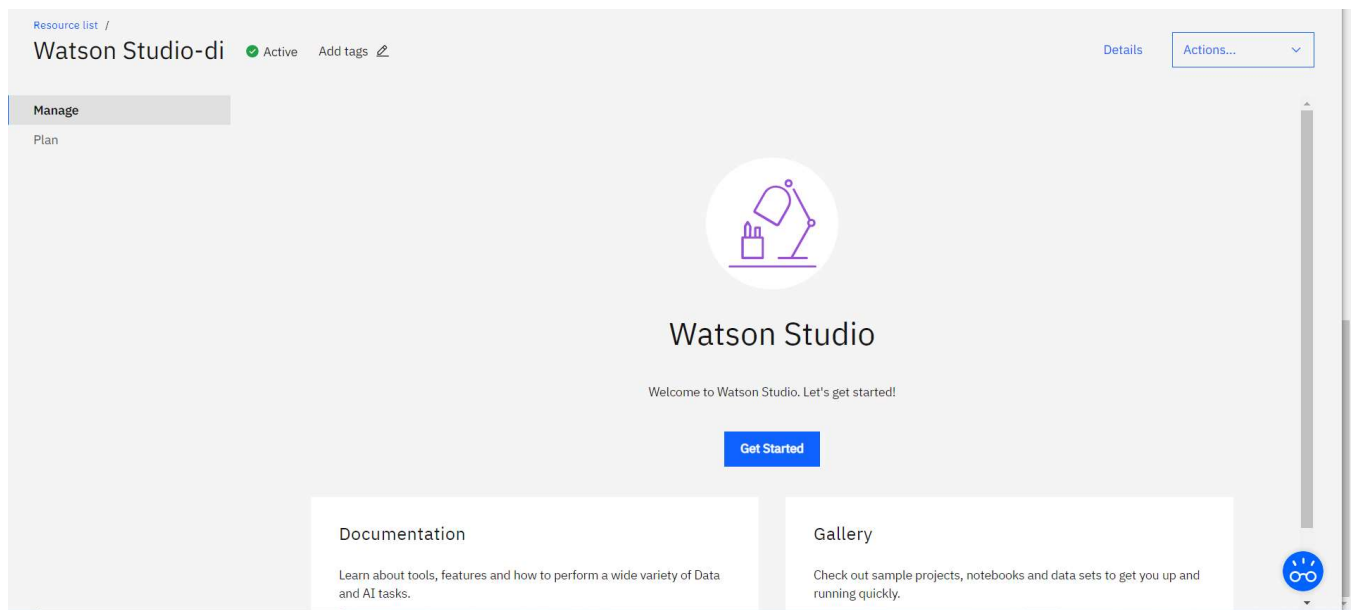




## Hands-on Lab: Publishing notebooks from Watson to Github

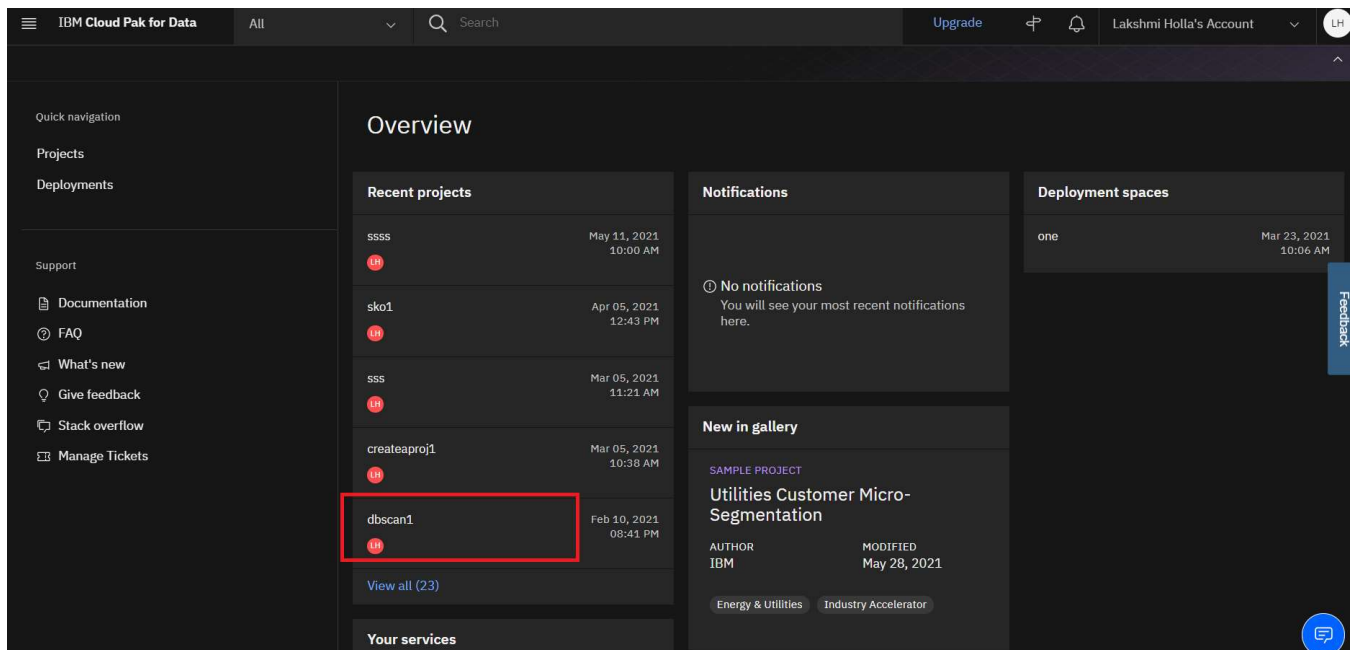
Effort: 20 mins

Step 1: Click on the **Get Started** Link of Watson Studio to navigate to the page where projects are listed.

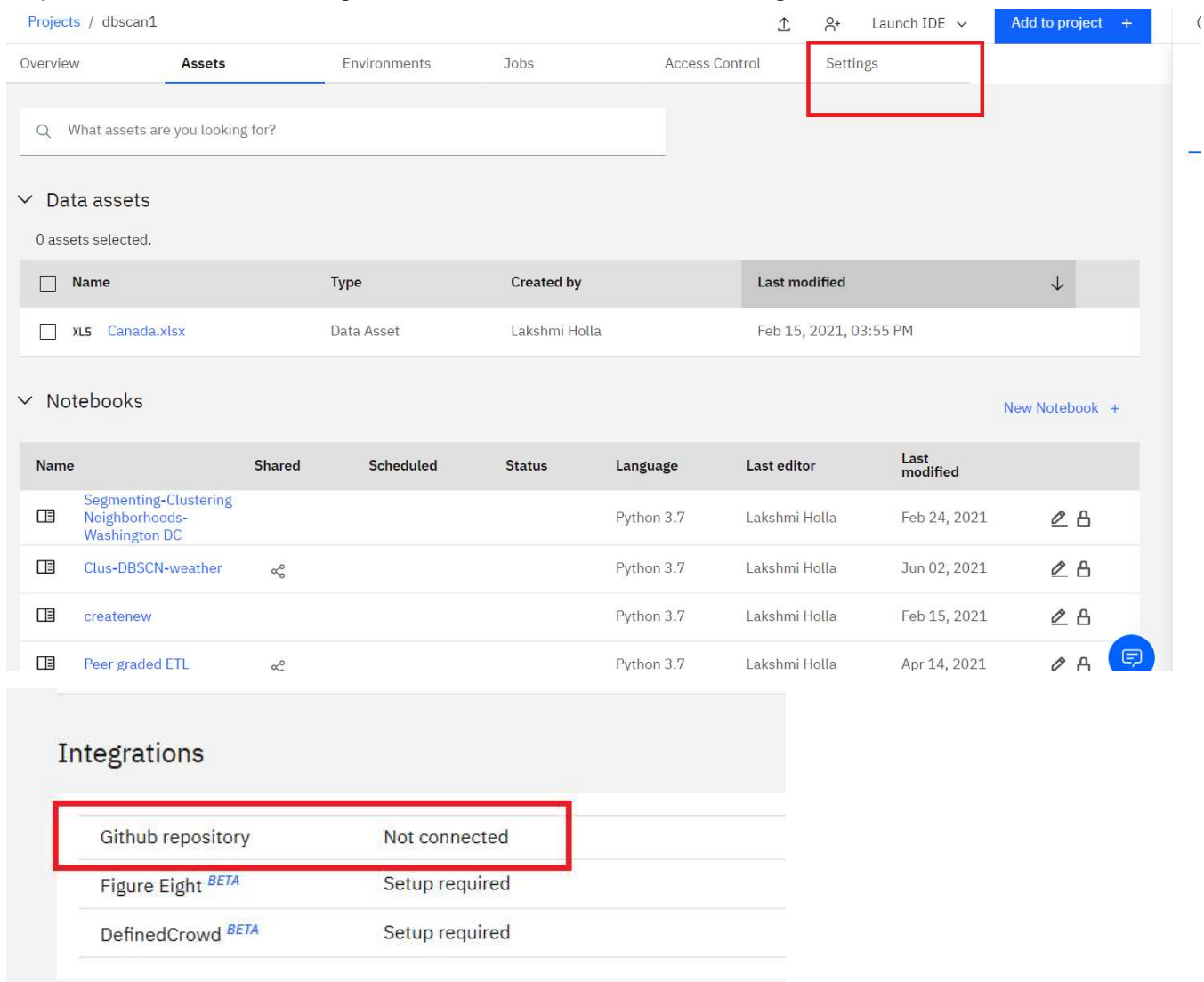


Step 2: Next click on the project which you want to integrate with github. This is the project containing your notebooks to be published on Github.

**Note:** This is just an example of a project . The project names will differ according what you have created.



Step 3: Next click on the **Settings** Tab and scroll down to check the **Integrations** section.



Step 4: Click on the GitHub repository on the integrations section. When you click on the textbox under the Repository url you will get the error as shown below:

## Integrations

Github repository

Not connected



A GitHub personal access token has not been setup. Configure settings.

Repository URL

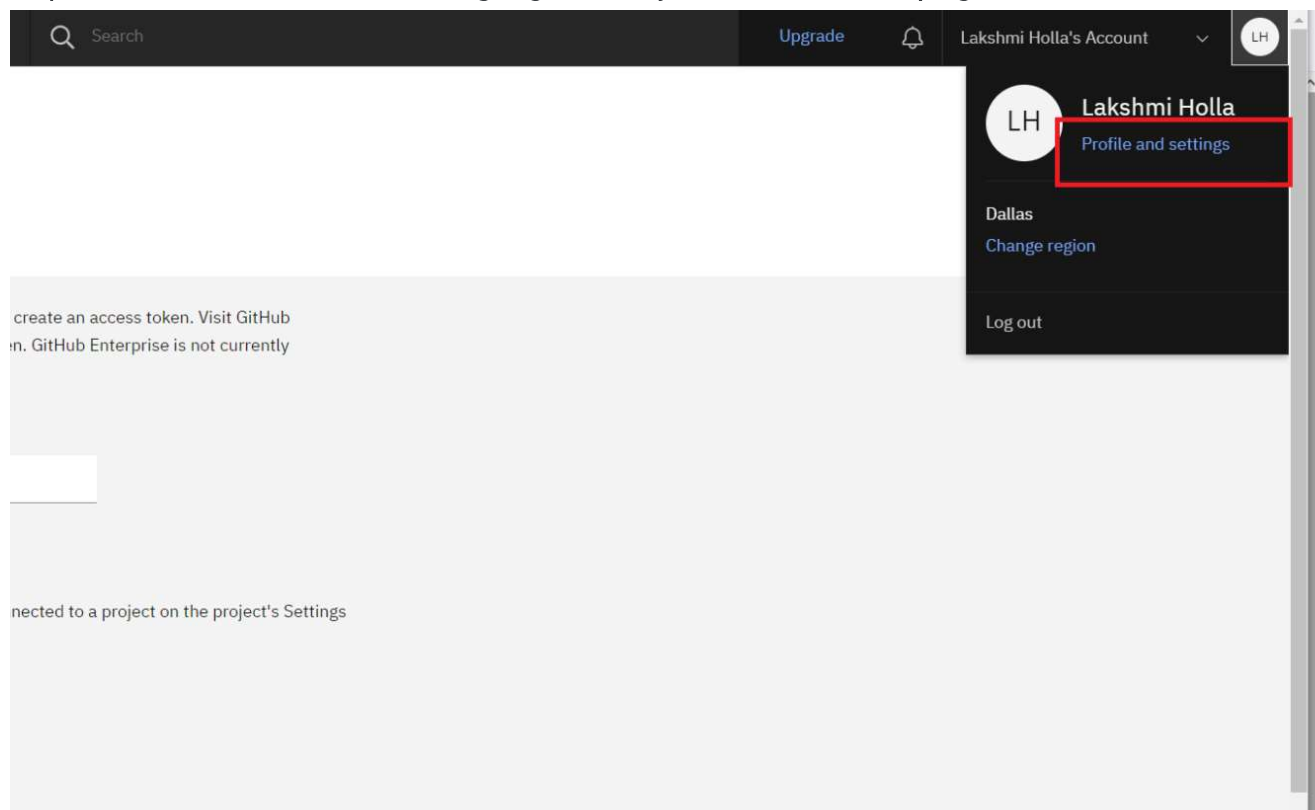
https://github.com/owner/repository-name

This field is required.

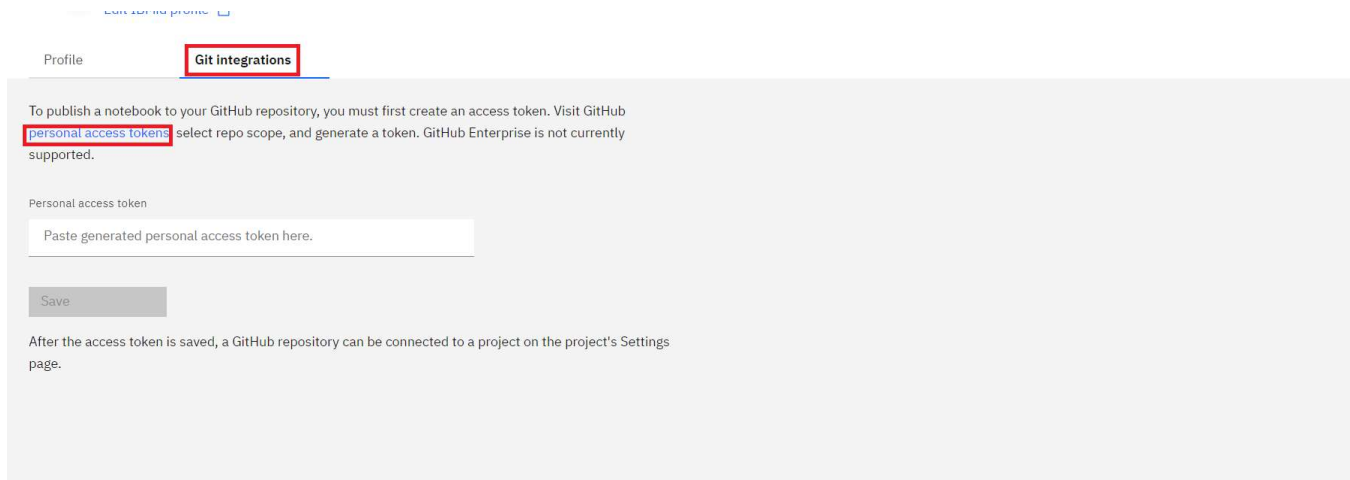
Update

To create and configure the personal access token follow the subsequent steps.

Step 5: Next click on Profiles and Settings right below your initials on the top right screen.



Step 6: Click on the gitIntegrations tab.



**Step 7:** Click on personal access token. This will prompt you to enter your github password and login to github. Later create a token by specifying the name in the **Note** and choose **repo** scope.

GitHub Apps

OAuth Apps

Personal access tokens

## New personal access token

Personal access tokens function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API over Basic Authentication](#).

**Note**

IBM Watson Studio

What's this token for?

**Select scopes**

Scopes define the access for personal tokens. [Read more about OAuth scopes](#).

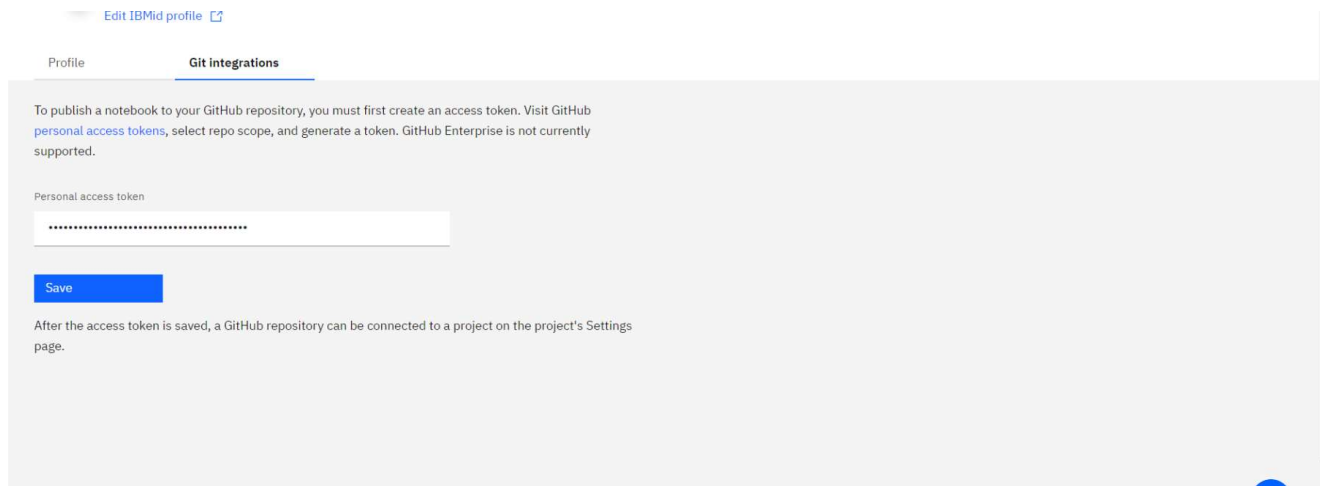
<input checked="" type="checkbox"/> <b>repo</b>	Full control of private repositories
<input checked="" type="checkbox"/> repo:status	Access commit status
<input checked="" type="checkbox"/> repo_deployment	Access deployment status
<input checked="" type="checkbox"/> public_repo	Access public repositories
<input checked="" type="checkbox"/> repo:invite	Access repository invitations
<input checked="" type="checkbox"/> security_events	Read and write security events
<input type="checkbox"/> workflow	Update GitHub Action workflows
<input type="checkbox"/> write:packages	Upload packages to GitHub Package Registry
<input type="checkbox"/> read:packages	Download packages from GitHub Package Registry
<input type="checkbox"/> delete:packages	Delete packages from GitHub Package Registry
<input type="checkbox"/> admin:org	Full control of orgs and teams, read and write org projects
<input type="checkbox"/> write:org	Read and write org and team membership, read and write org projects
<input type="checkbox"/> read:org	Read org and team membership, read org projects

Scroll down and click '**Generate Token**'.

**Step 8: Copy the token generated.**

8wzewDE0pifZLrPx6sUgQeYk4BRoCw 

**Step 9:** Paste it under the **Personal Access token** in the Git Integrations tab of Watson and click on save.



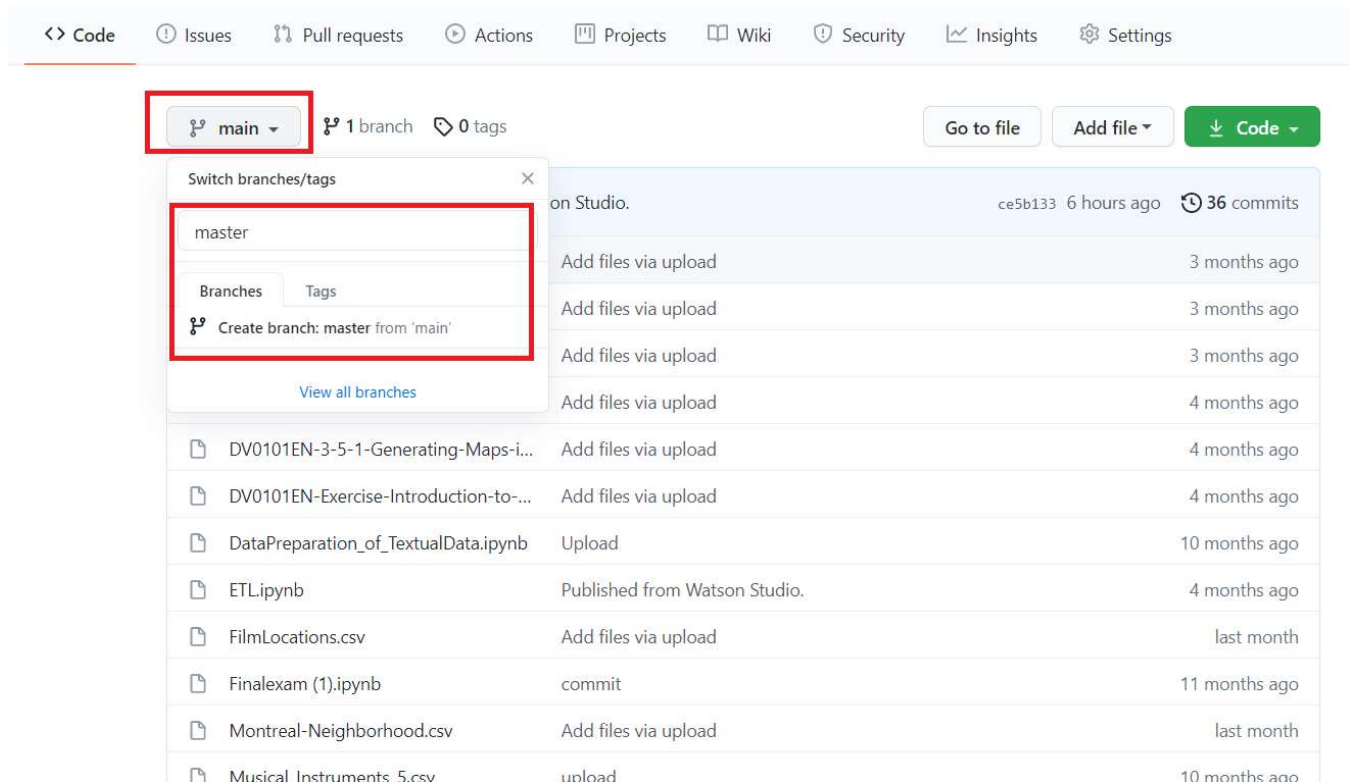
Step 10: Go back to your github repository by clicking this [link](#).

Select your repository on the left pane.

Create a branch called **master** under your repository.

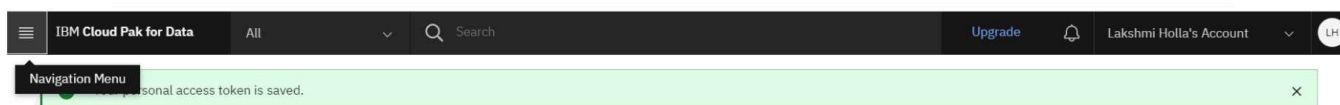
Step 11: Click the button on the left side of your screen that shows the current branch as "**main**" and has a dropdown arrow.

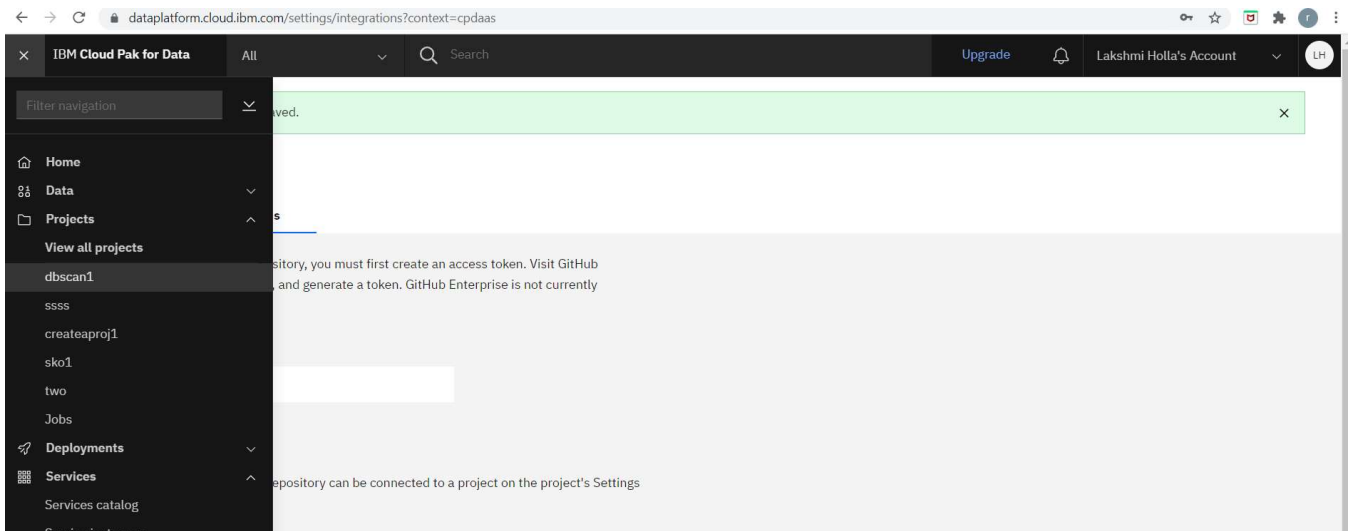
Step 12: Create a new branch called "**master**"



This is necessary because when you connect a repository to a project in Watson Studio and try to publish a notebook to GitHub, it automatically pushes your notebook to the master branch. If you only have a main branch in your repository and not one titled "master," Watson will not have anywhere to push your notebook.

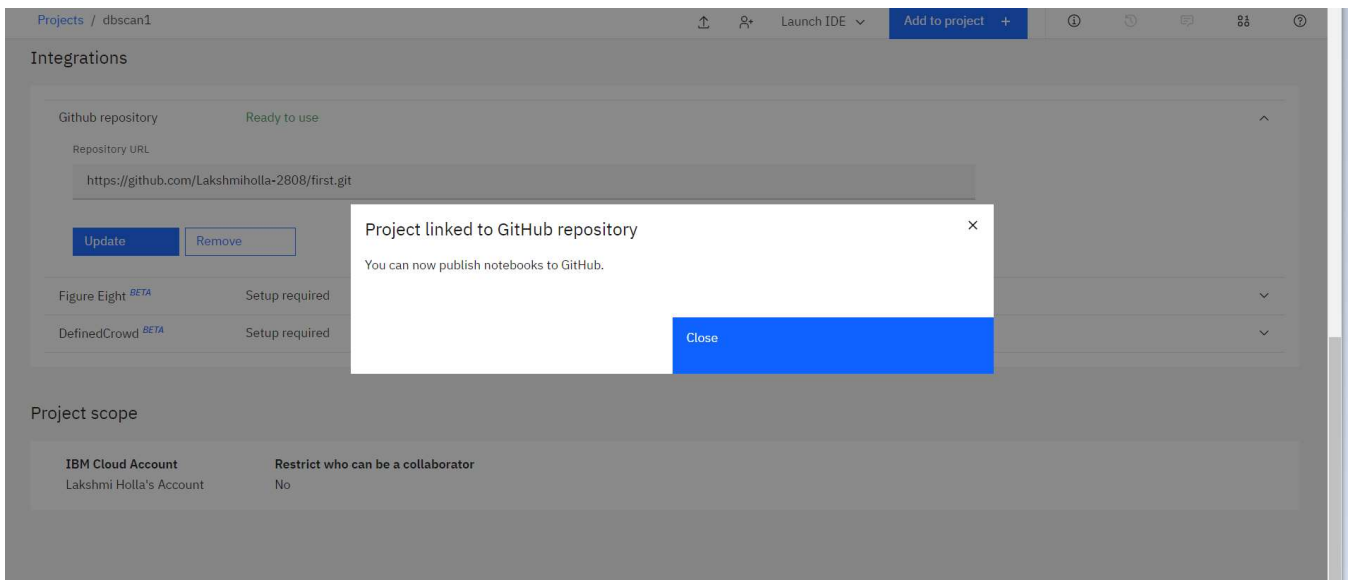
Step 13: Once done with this step navigate to your project on watson by clicking the Navigation menu.





#### Step 14: Go to the **settings** tab and provide the github link of your repository.

If you have not yet created the repository follow the steps given in the link [Github Repository Creation](#) for creating a repository.



If **update** is not enabled, click outside text box which will enable it and then click '**Update**'.

#### Step 15: Navigate to the **Assets** tab of your project and then click on the notebook which you want to publish.

Projects / dbscan1

Overview **Assets** Environments Jobs Access Control Settings

Q What assets are you looking for?

▼ Data assets

0 assets selected.

<input type="checkbox"/>	Name	Type	Created by	Last modified
<input type="checkbox"/>	XL5 Canada.xlsx	Data Asset	Lakshmi Holla	Feb 15, 2021, 03:55 PM

▼ Notebooks New Notebook +

Name	Shared	Scheduled	Status	Language	Last editor	Last modified	
<input type="checkbox"/> Segmenting-Clustering Neighborhoods- Washington DC				Python 3.7	Lakshmi Holla	Feb 24, 2021	
<input type="checkbox"/> Clus-DBSCN-weather				Python 3.7	Lakshmi Holla	Jun 02, 2021	
<input type="checkbox"/> createnew				Python 3.7	Lakshmi Holla	Feb 15, 2021	
<input type="checkbox"/> Peer graded ETL				Python 3.7	Lakshmi Holla	Apr 14, 2021	

This will open your notebook.

## Step 16: Click on the edit option to edit your notebook.

← → ↻ dataplatform.cloud.ibm.com/analytics/notebooks/v2/a89eedbf-436b-4b5a-99ab-02ff77021cae/view?projectId=938946c5-d480-4a5a-9c10-b3017f77acbc3&context=cpdaas

IBM Cloud Pak for Data All Search Upgrade Lakshmi Holla's Account LH

Projects / dbscan1 / Segmenting-Clustering Neighbor...

Edit

```
In [2]: import numpy as np # Library to handle data in a vectorized manner

import pandas as pd # Library for data analysis
pd.set_option('display.max_columns', None)
pd.set_option('display.max_rows', None)

import json # Library to handle JSON files

!pip install geocoder

# !conda install -c conda-forge geopy --yes # uncomment this line if you haven't completed the Foursquare API Lab
!pip install geopy
from geopy.geocoders import Nominatim # convert an address into Latitude and Longitude values

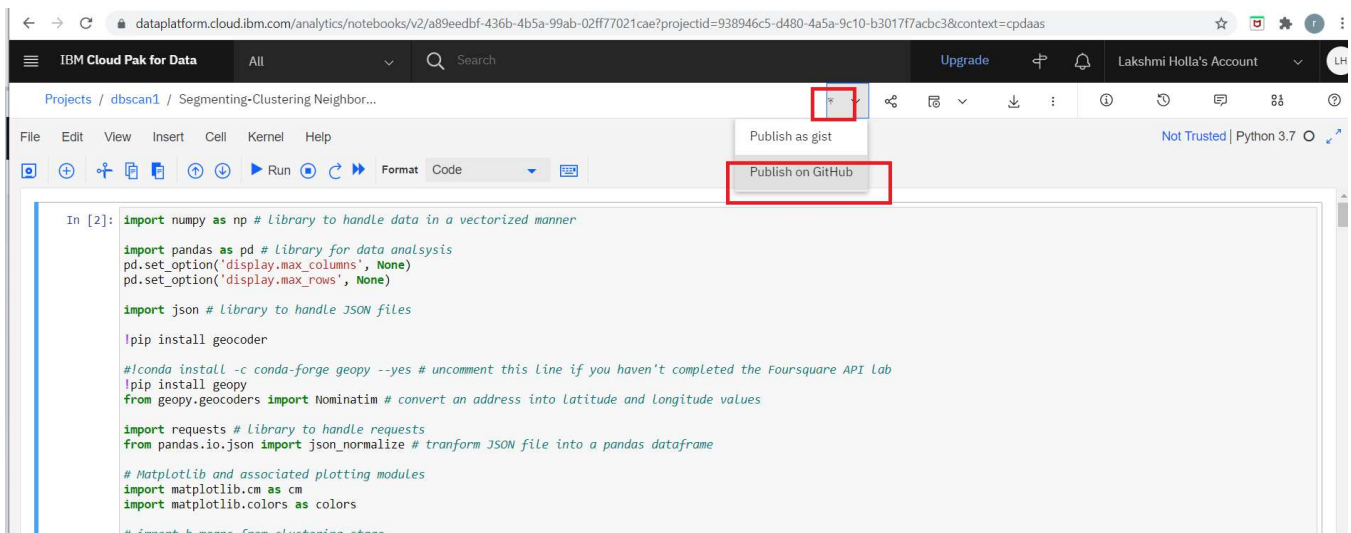
import requests # Library to handle requests
from pandas.io.json import json_normalize # transform JSON file into a pandas dataframe

# Matplotlib and associated plotting modules
import matplotlib.cm as cm
import matplotlib.colors as colors

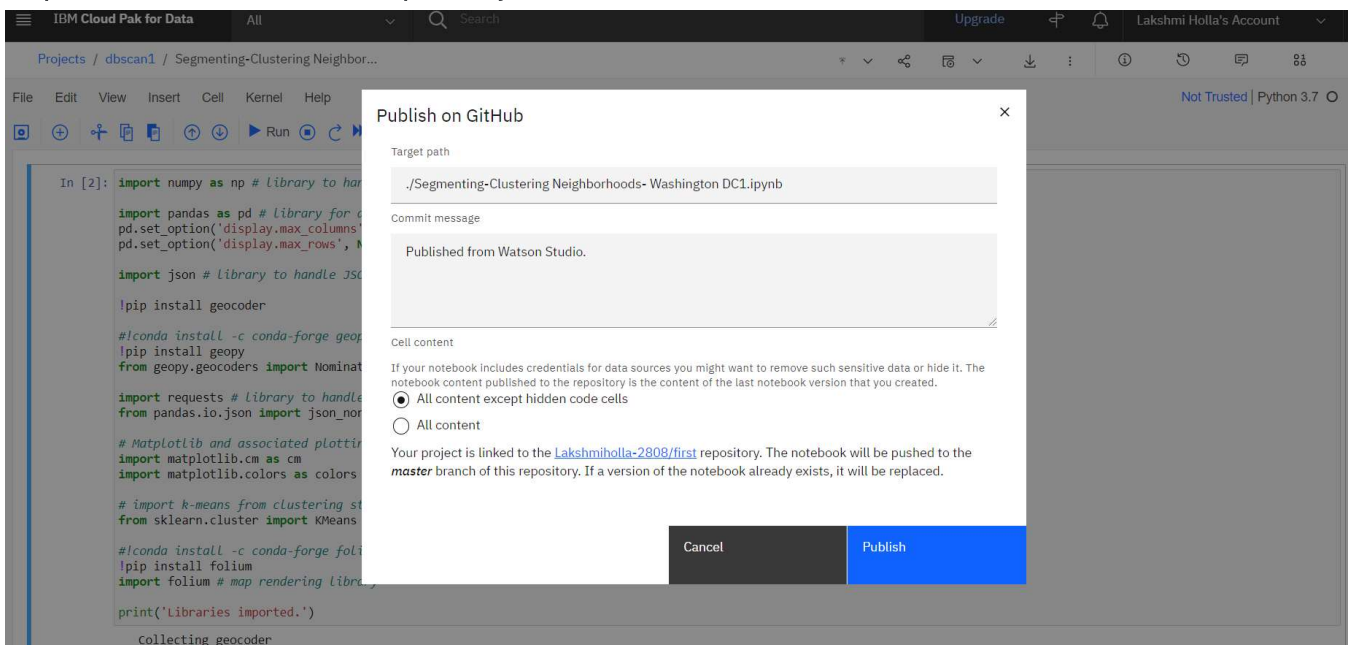
# import k-means from clustering stage
from sklearn.cluster import KMeans
```

## Step 17: Select Publish on github.

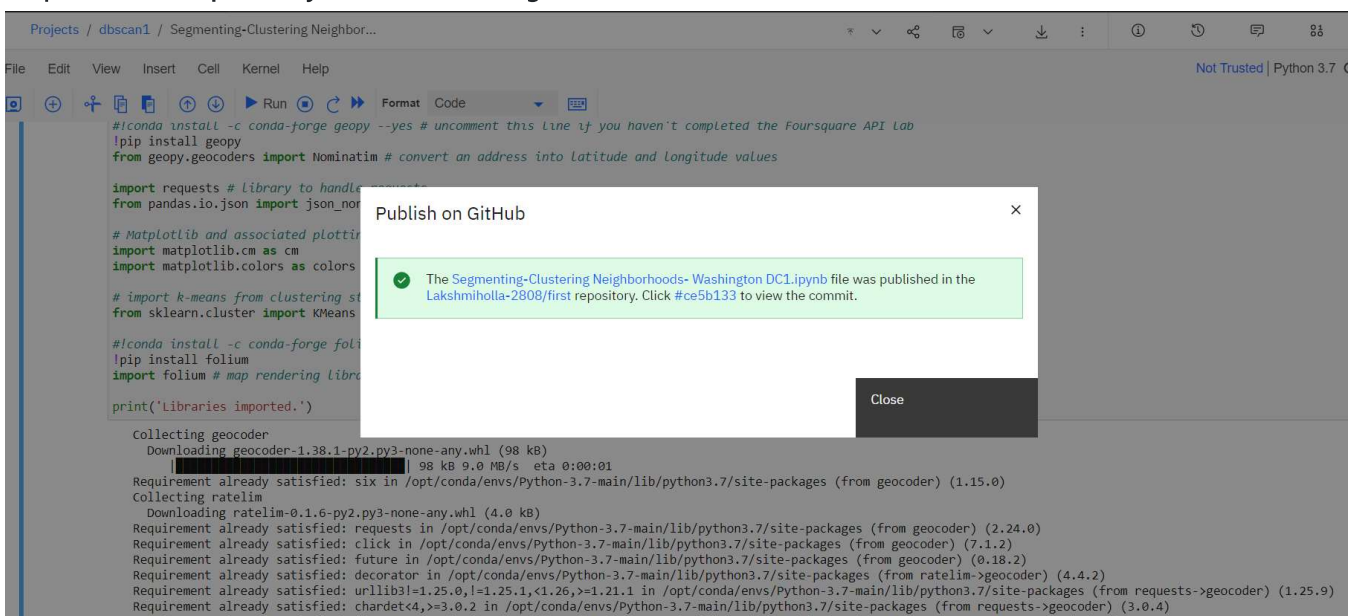




## Step 18: Next click on Publish to publish your notebook



## Step 19: This will publish your notebook to github.





## Author(s)

Joseph Santarcangelo

## Other Contributor(s)

Lakshmi Holla

## Change log

Date	Version	Changed by	Change Description
2021-06-03	0.1	Lakshmi Holla	Initial Version

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