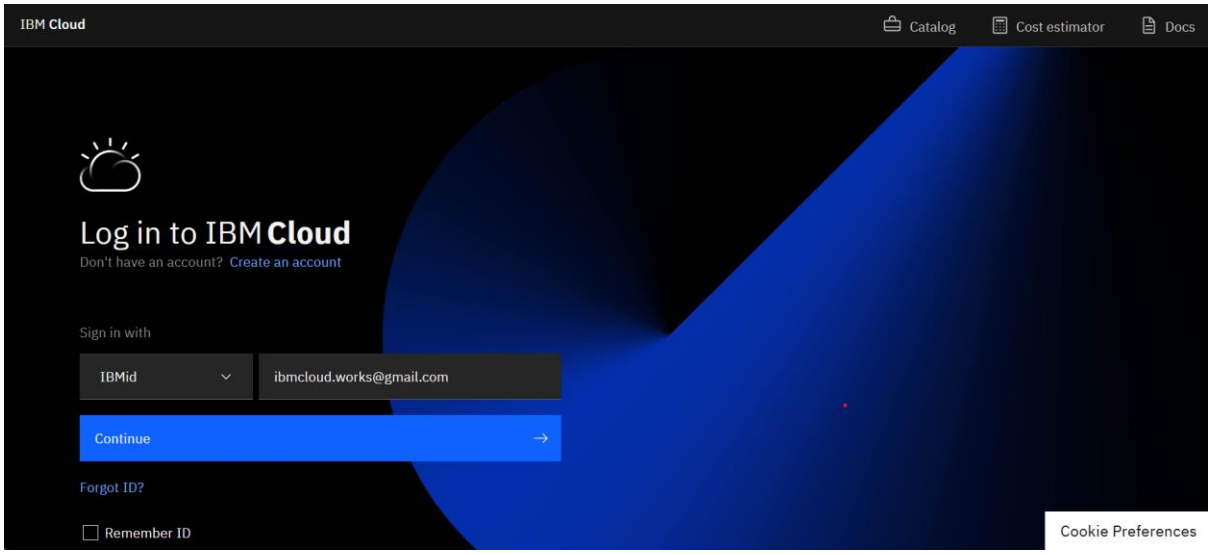
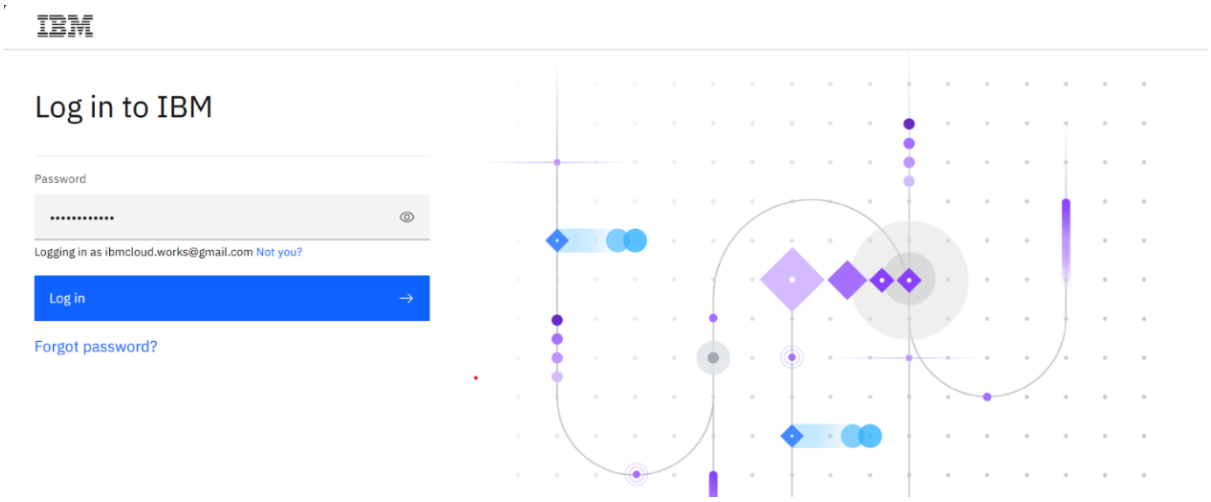
DATA PREP KIT

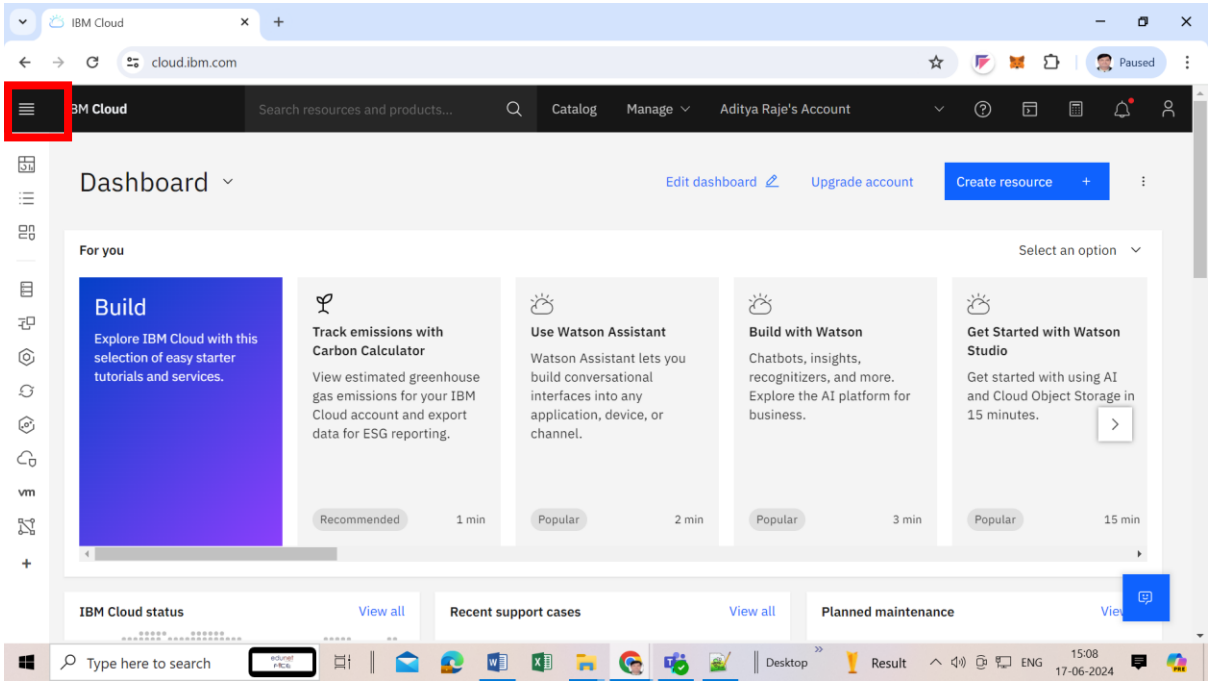
Step1: Open IBM Cloud login page with this link cloud.ibm.com, enter your Gmail and click on Continue



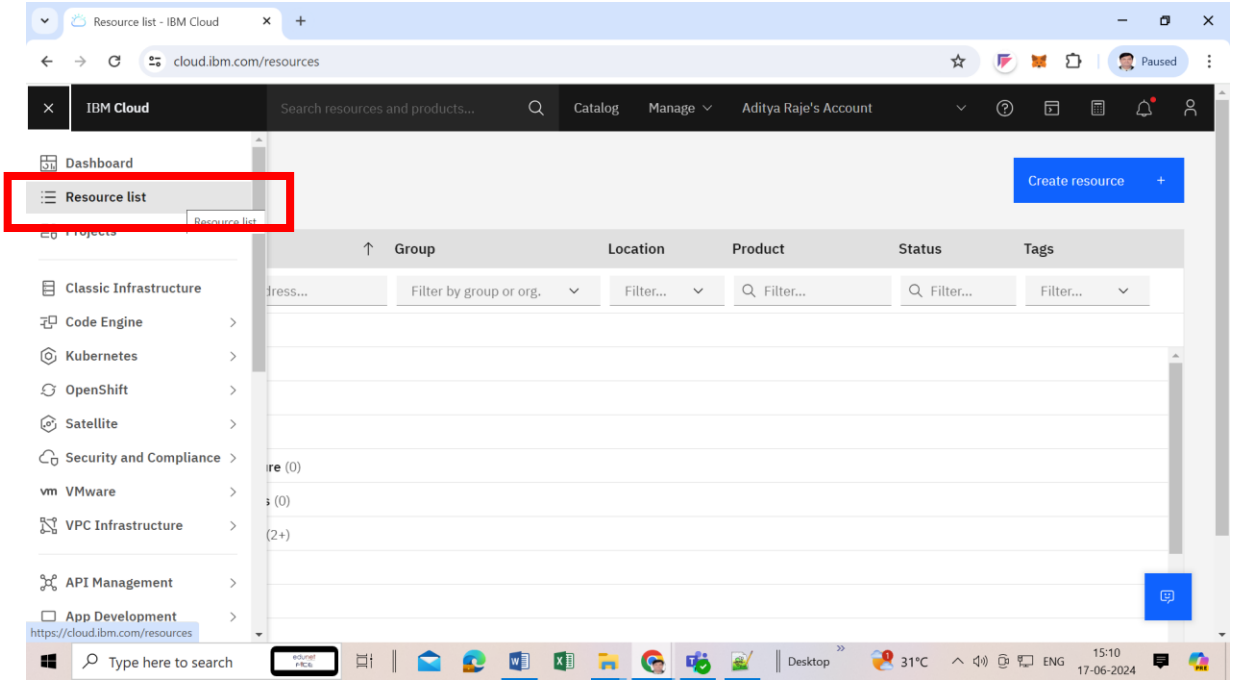
Step 2: Enter your IBM Academic portal password, Click on Login



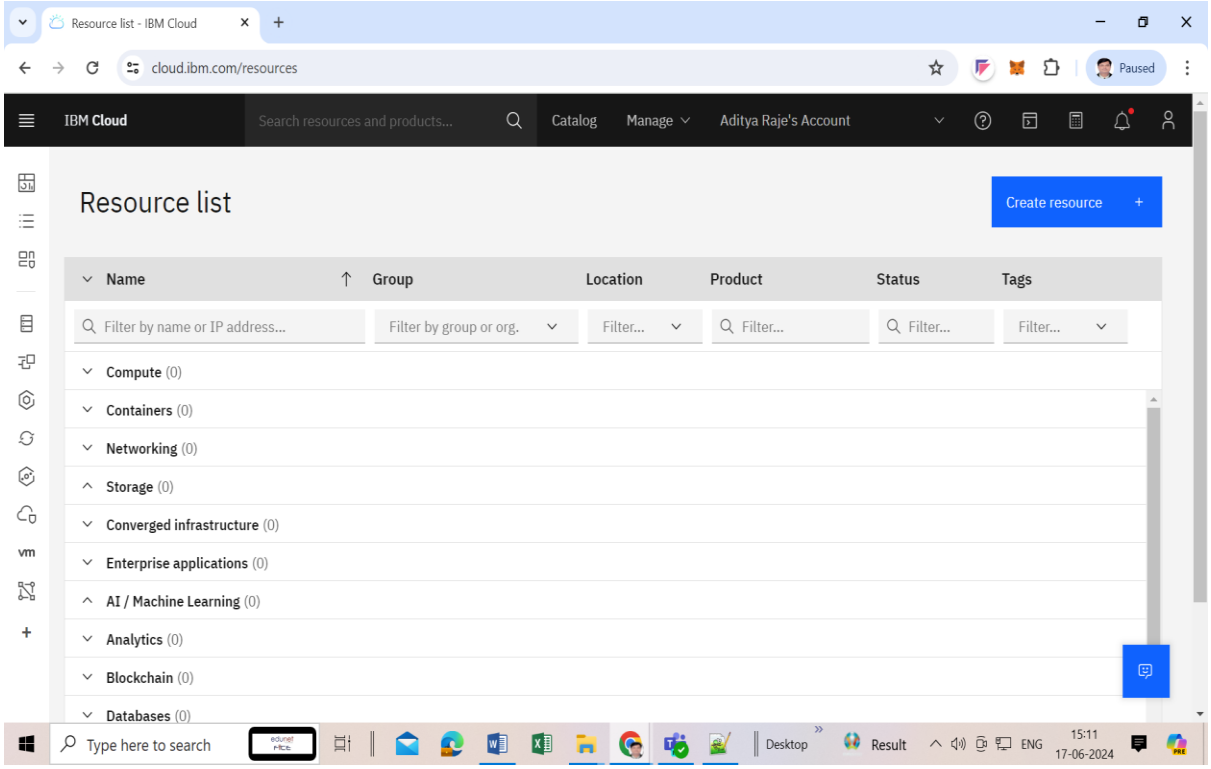
Step 3: This is IBM Cloud Dash board

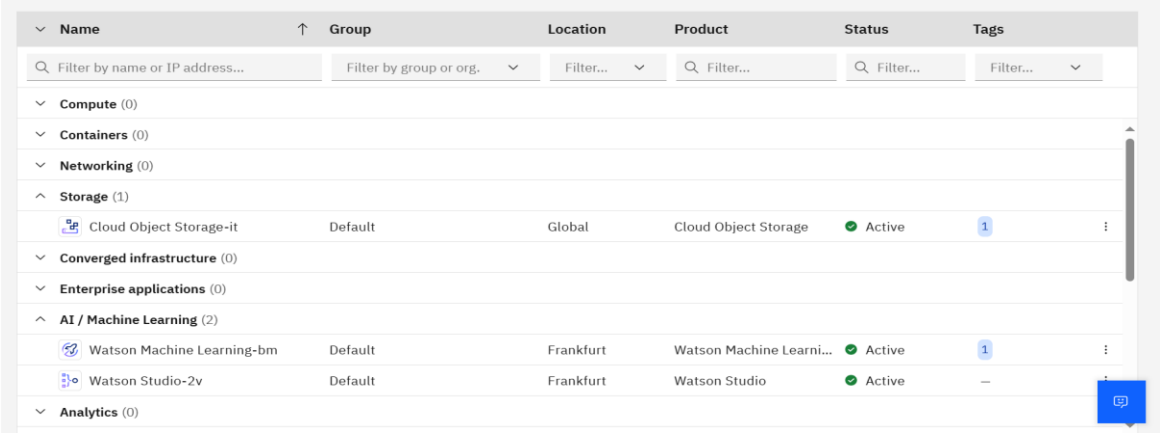


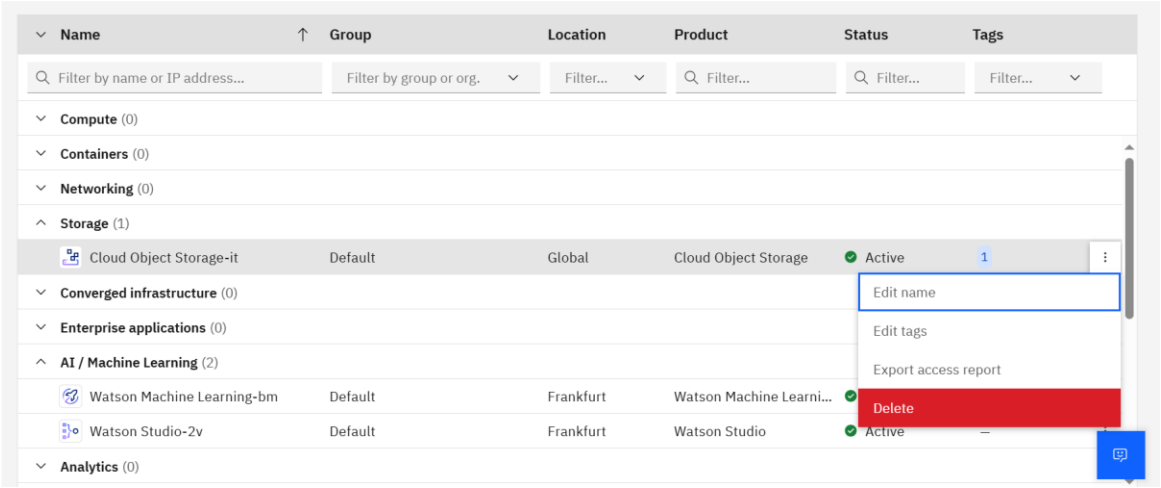
Step4 : From top left ,Click on **Navigation Menu → Resource list**

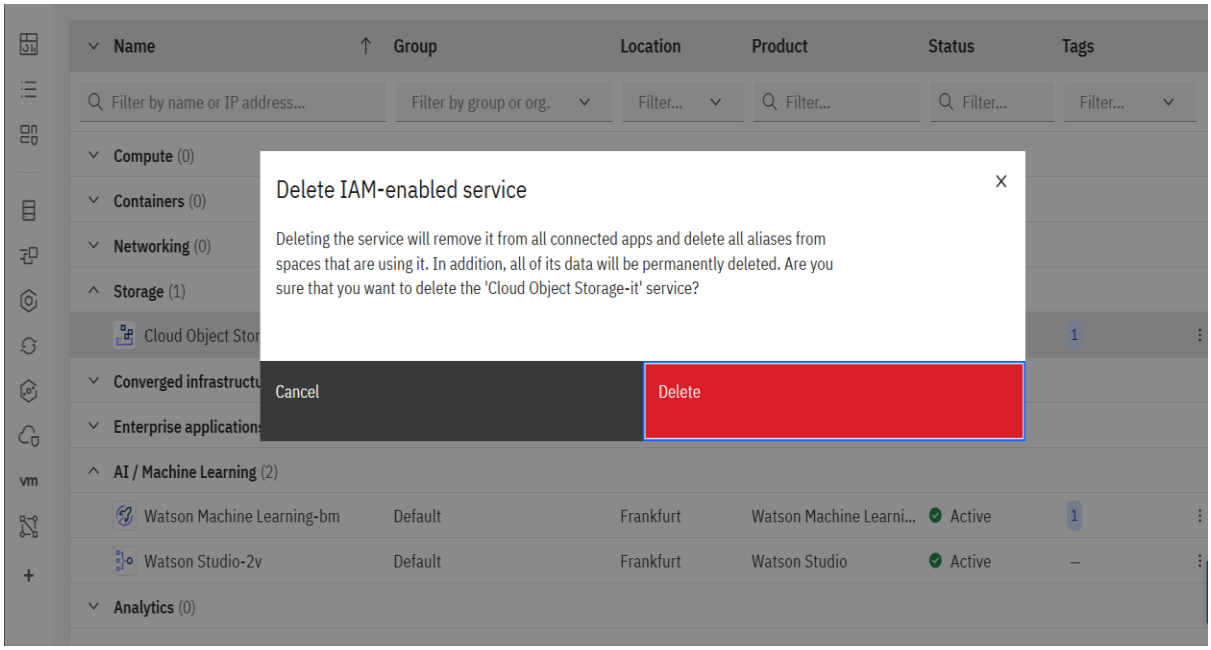


Step 5: Make sure you deleted all resources under **Storage** and AI**/ Machine Learning**

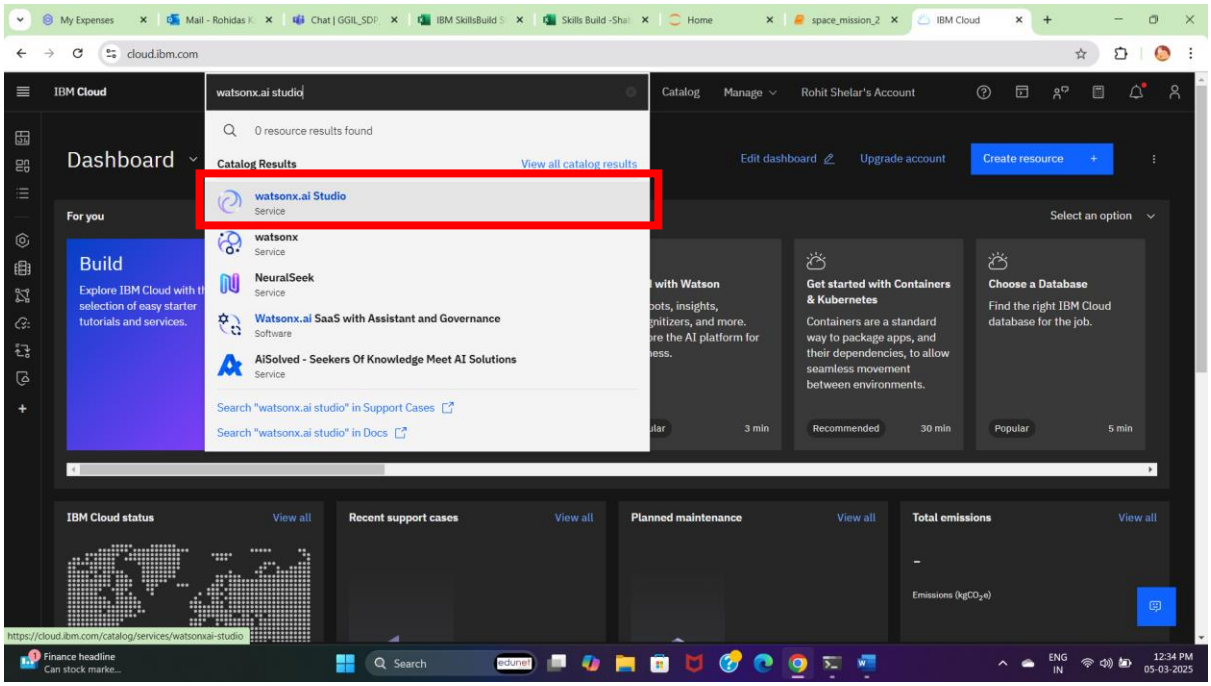




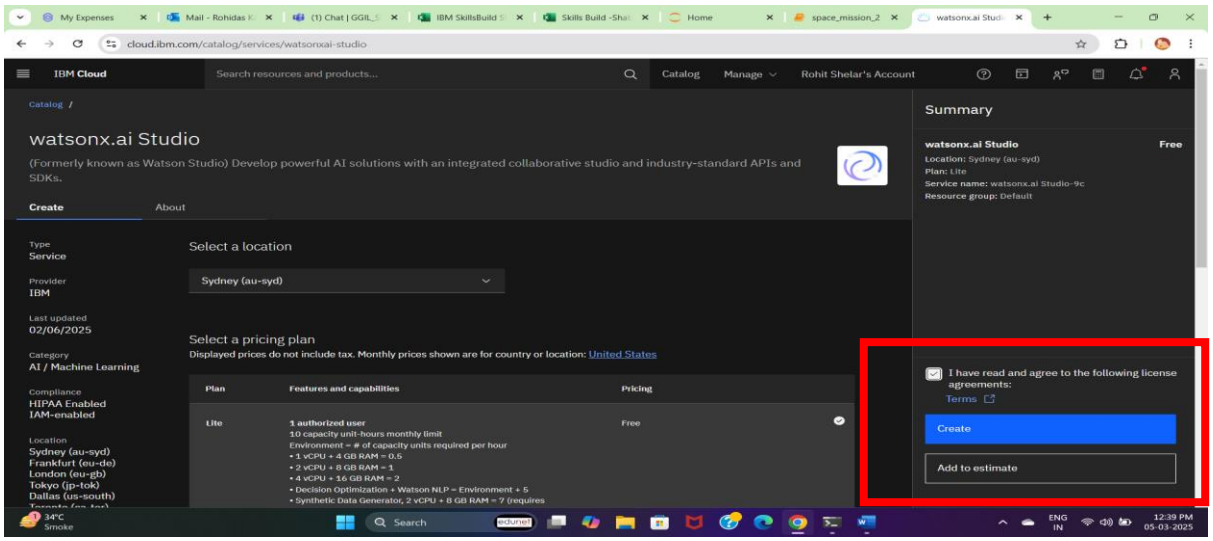




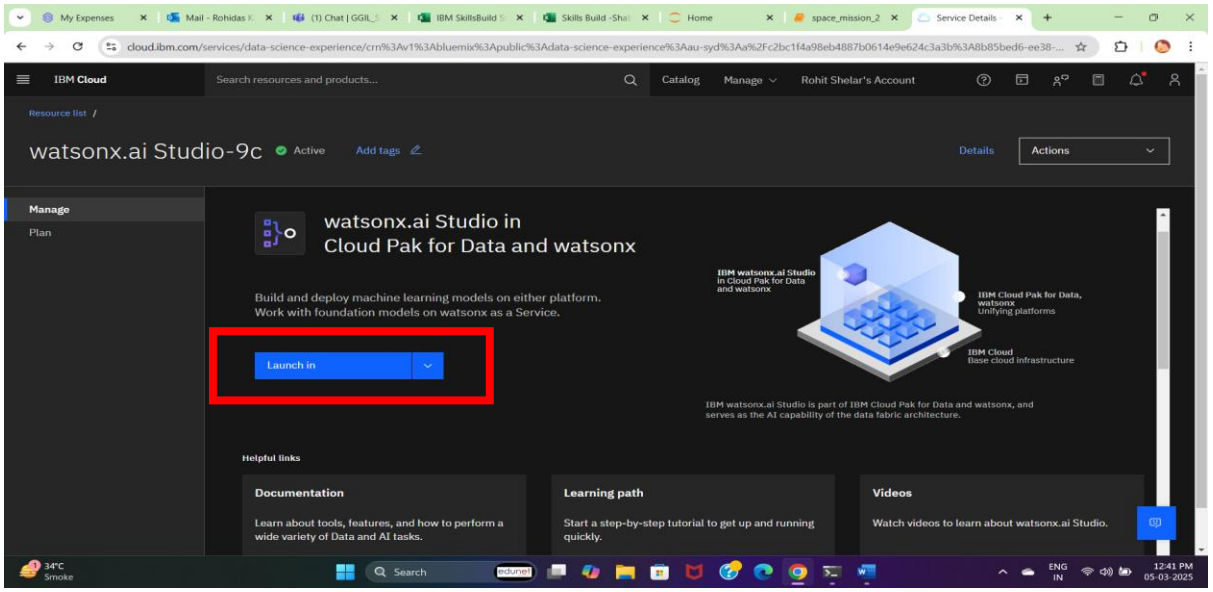
Step 6: Search for **Watsonx.ai Studio** service



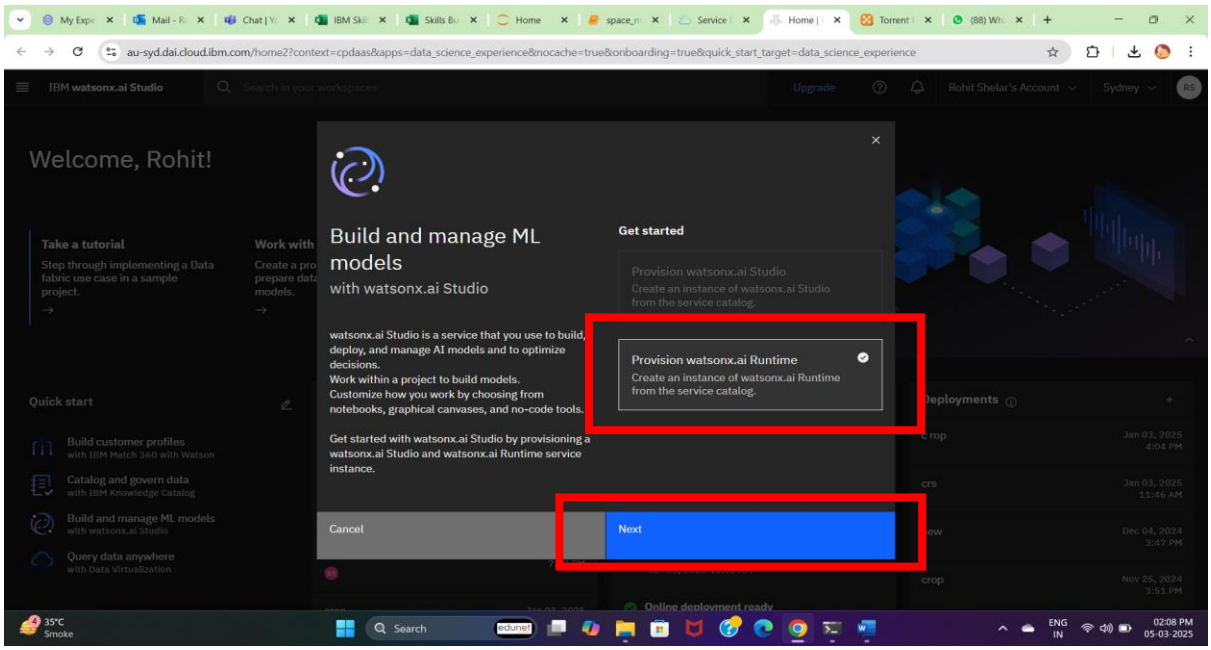
Step 7: Create **Watsonx.ai Studio** service with Free pricing, Click on check box then click on create



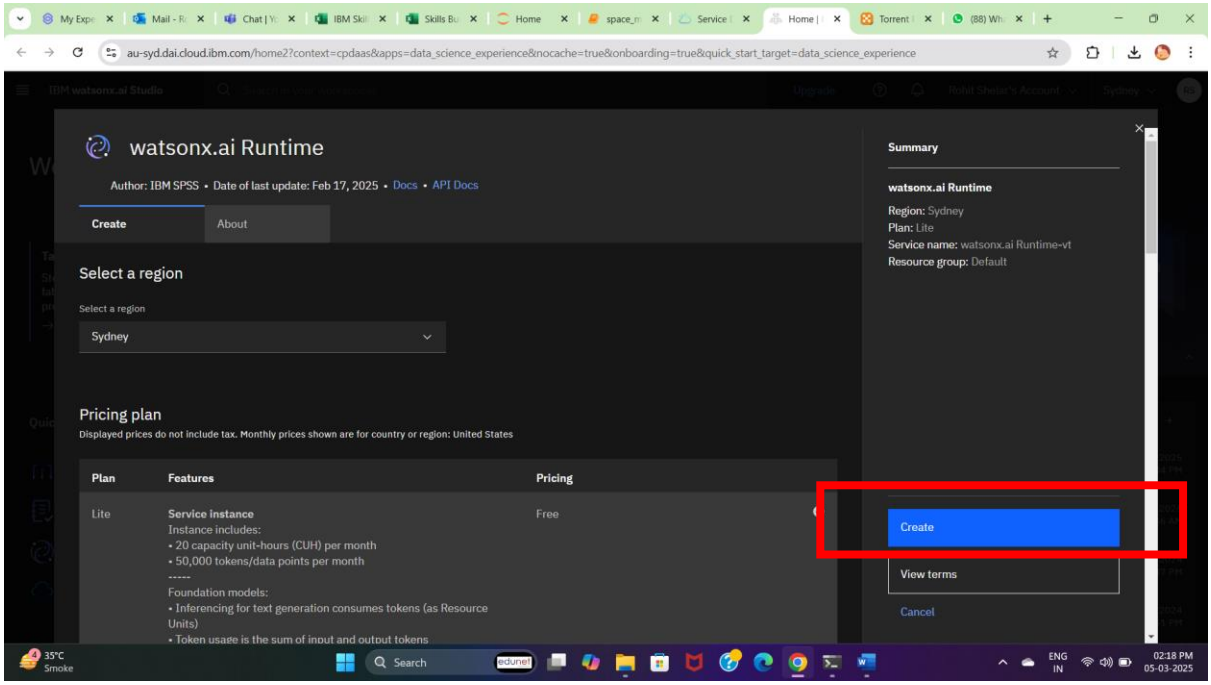
Step 8: Click on **Launch In**



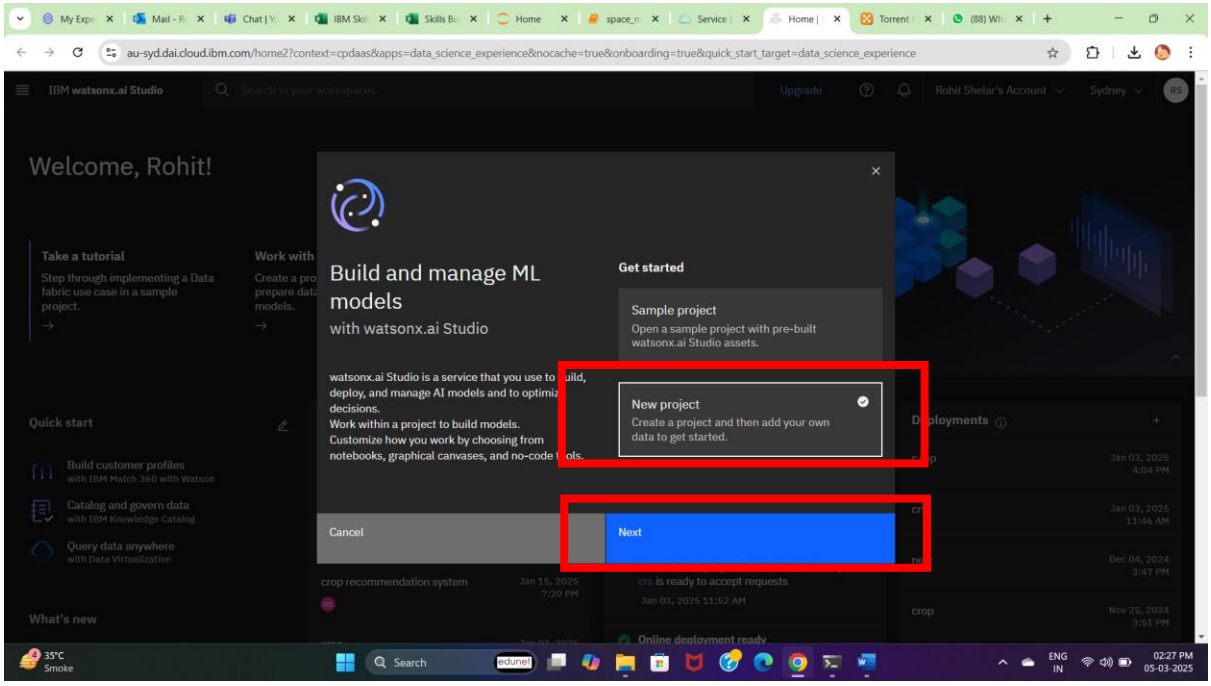
Step 8: Select **Provision Watsonx.ai Runtime**, Click on **Next**



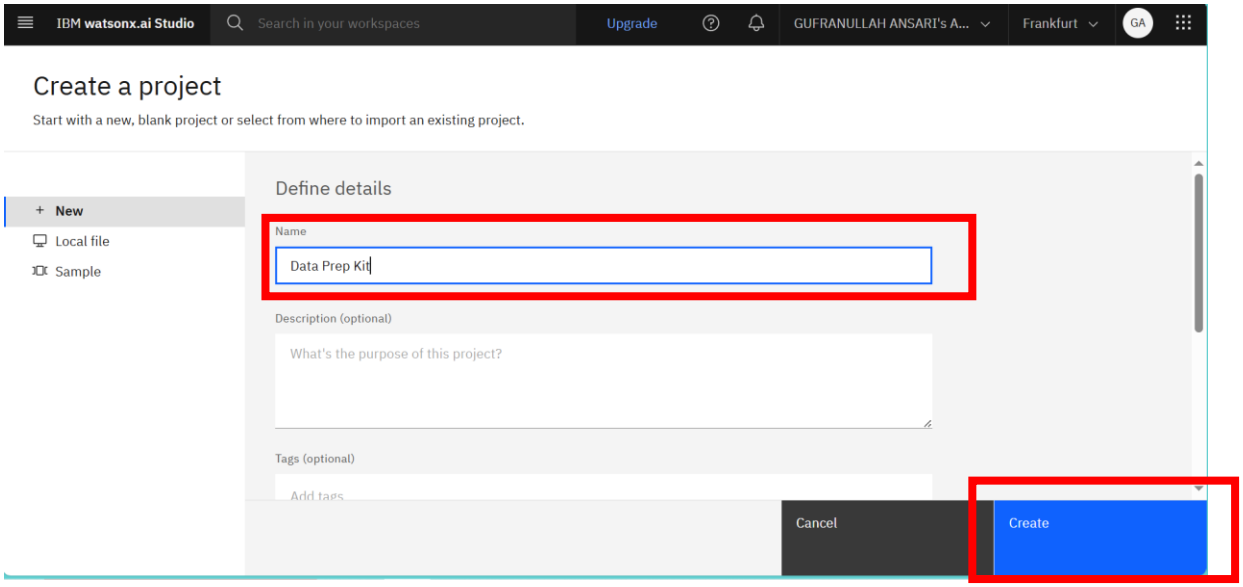
Step 9: Create **Watsonx.ai Runtime** service, click on **Create**



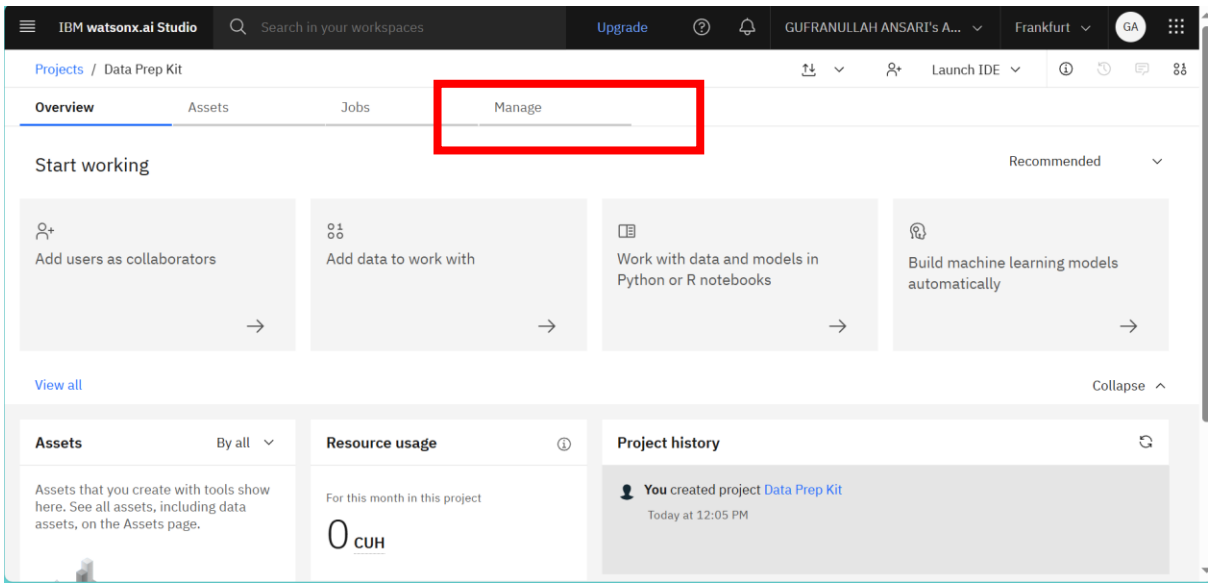
Step 10: Click on **New Project** and **Next**



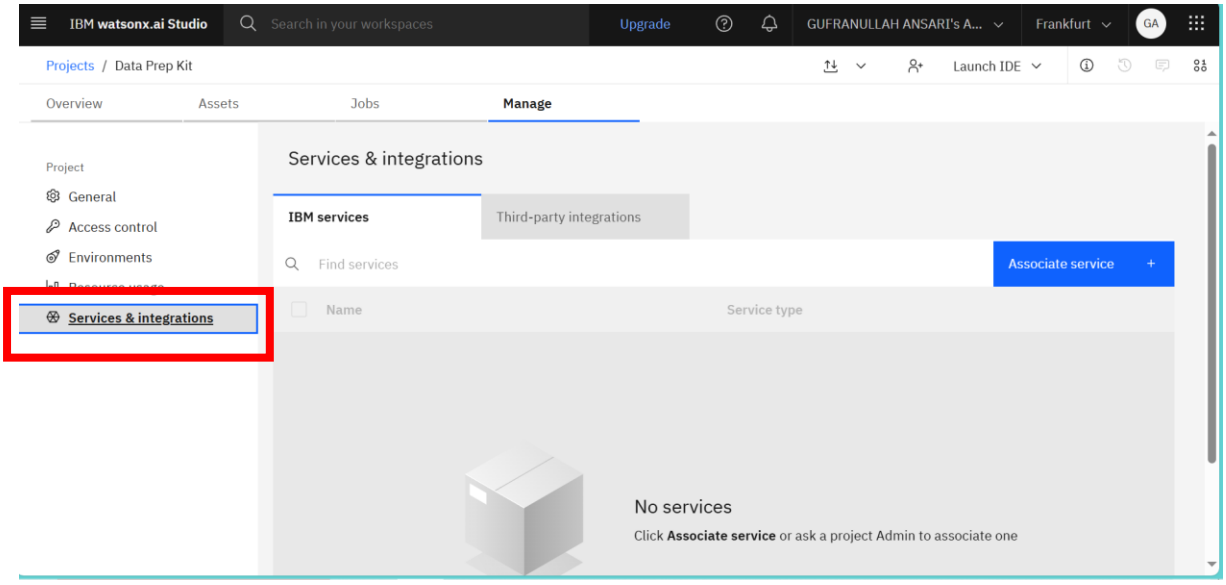
Step 11: In Create Project window – Provide details about **Name**, **Description** and click on **Add** for storage



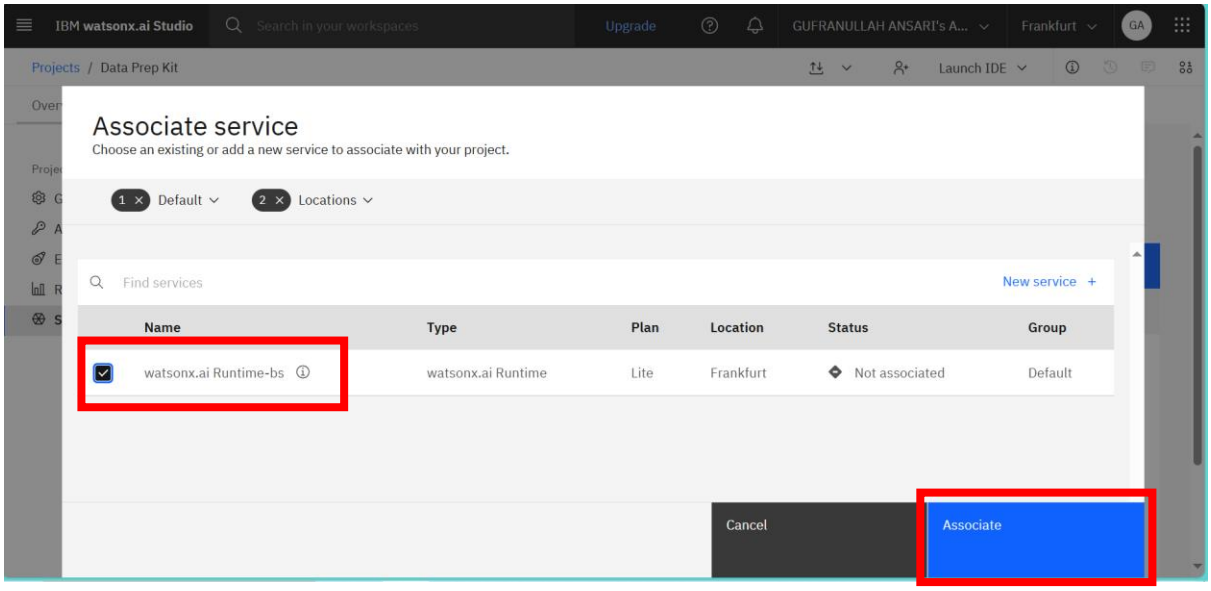
Step 12: Click on the Manage Section



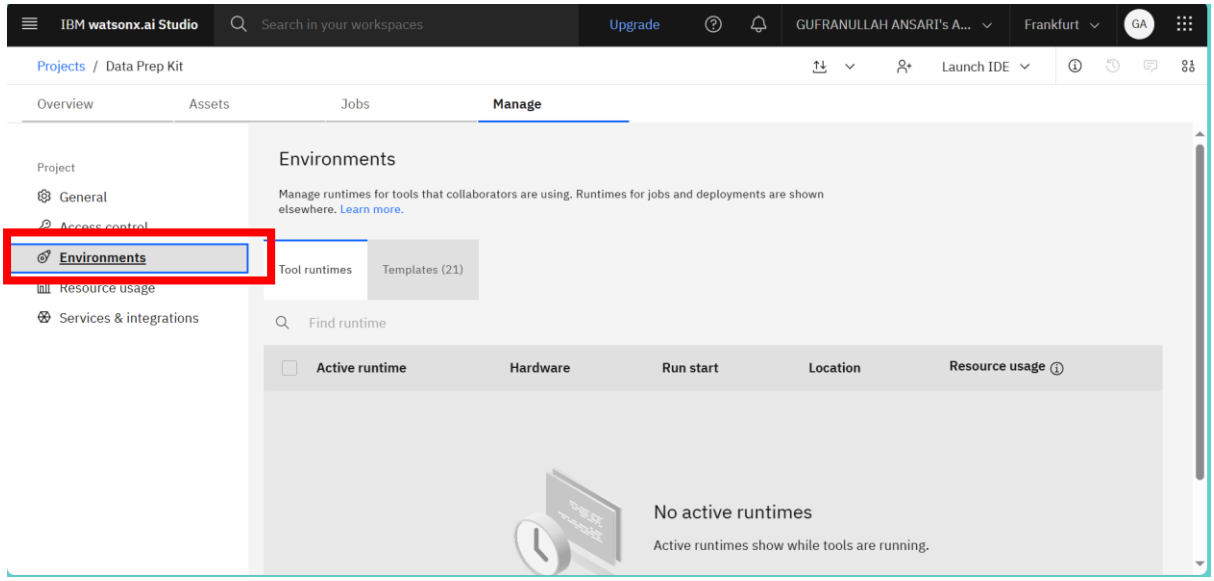
Step 13: Click on the Service & Integrations



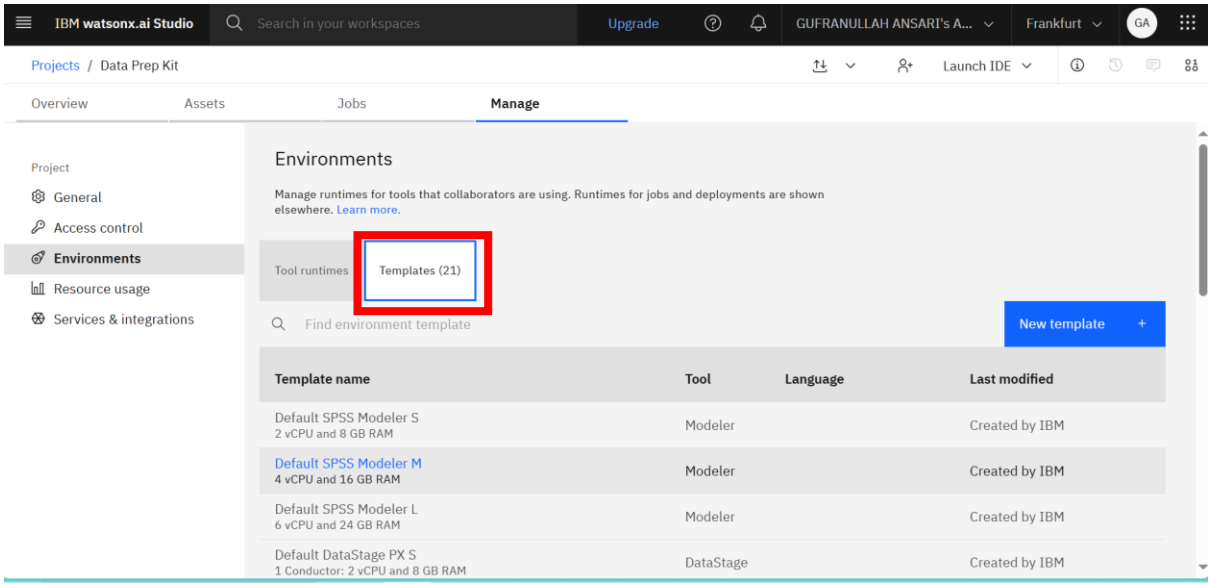
Step 14: Associate the service watsonx.ai Runtime



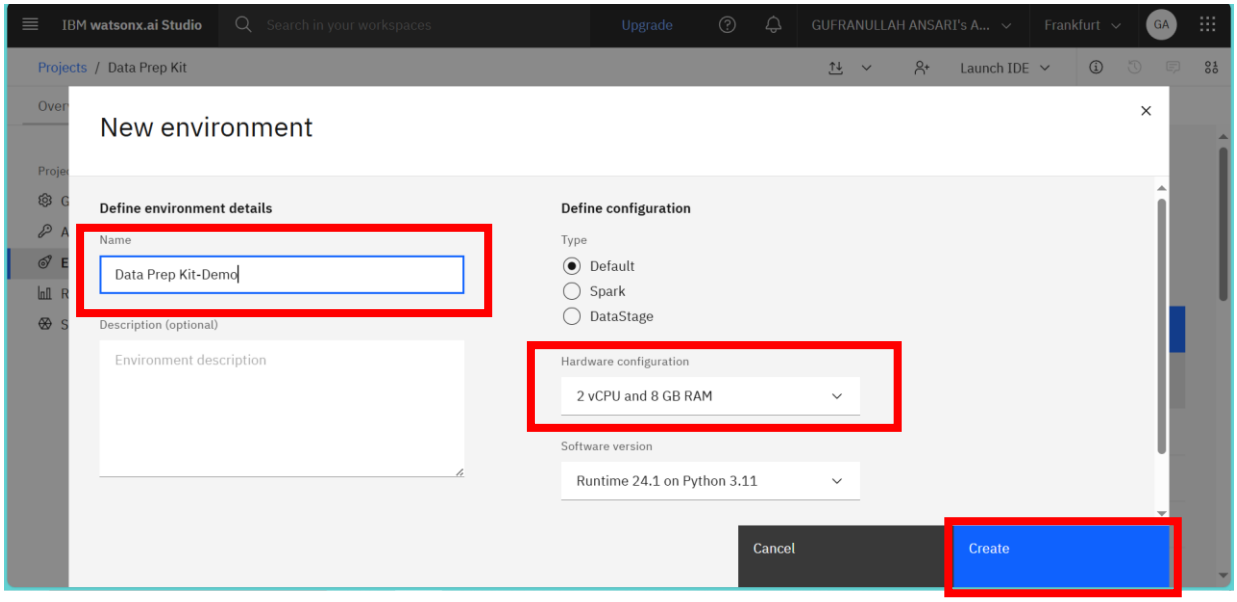
Step 15: Select the Environments section



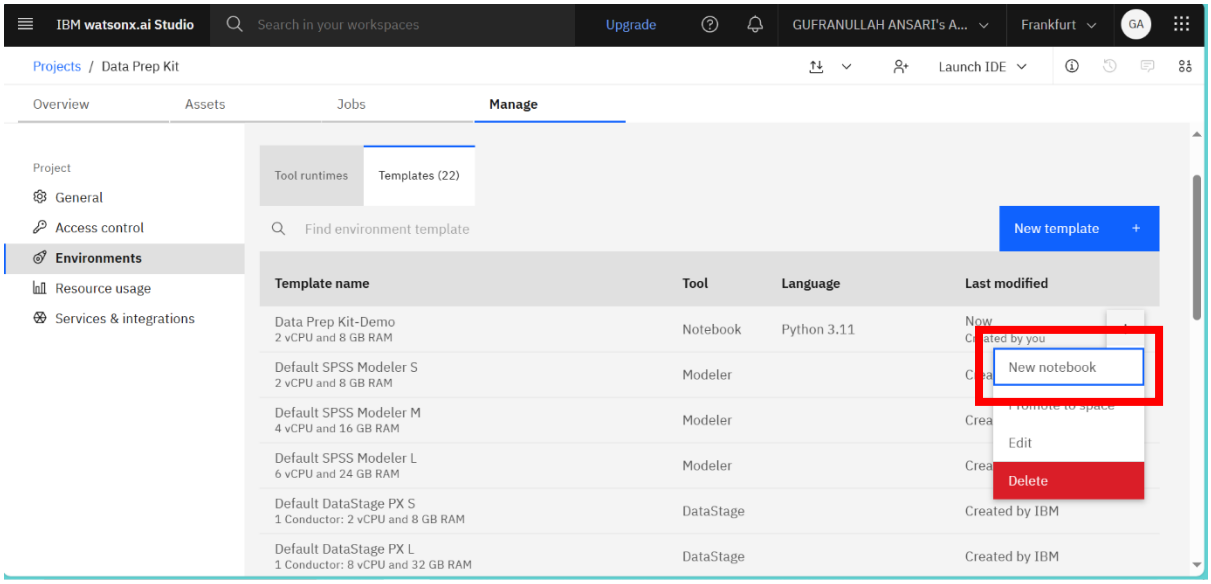
Step 16: Click on the Templates section



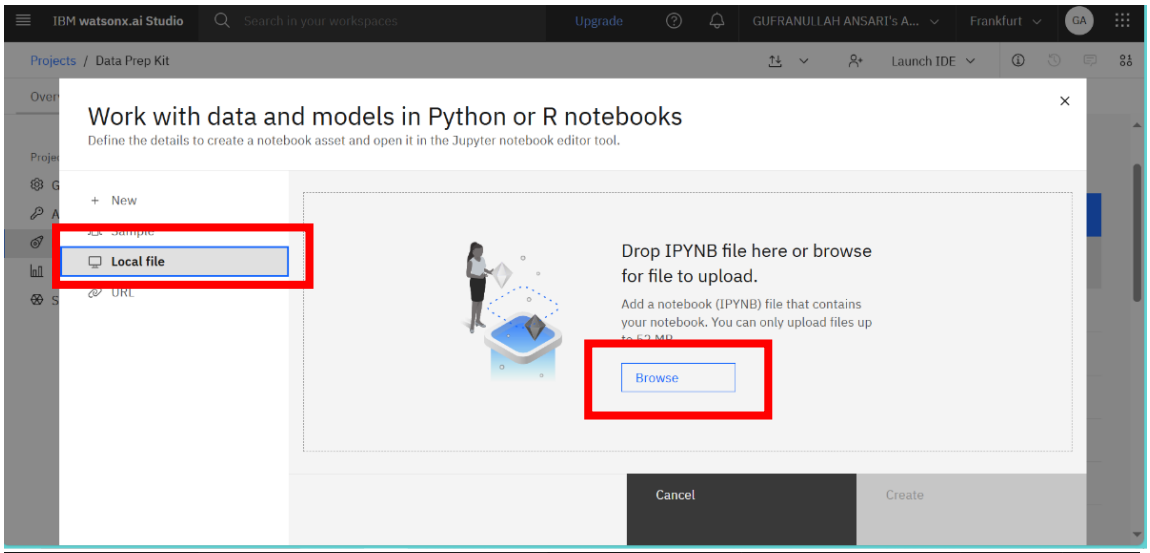
Step 17: Define New environment Name & Hardware Configuration Create

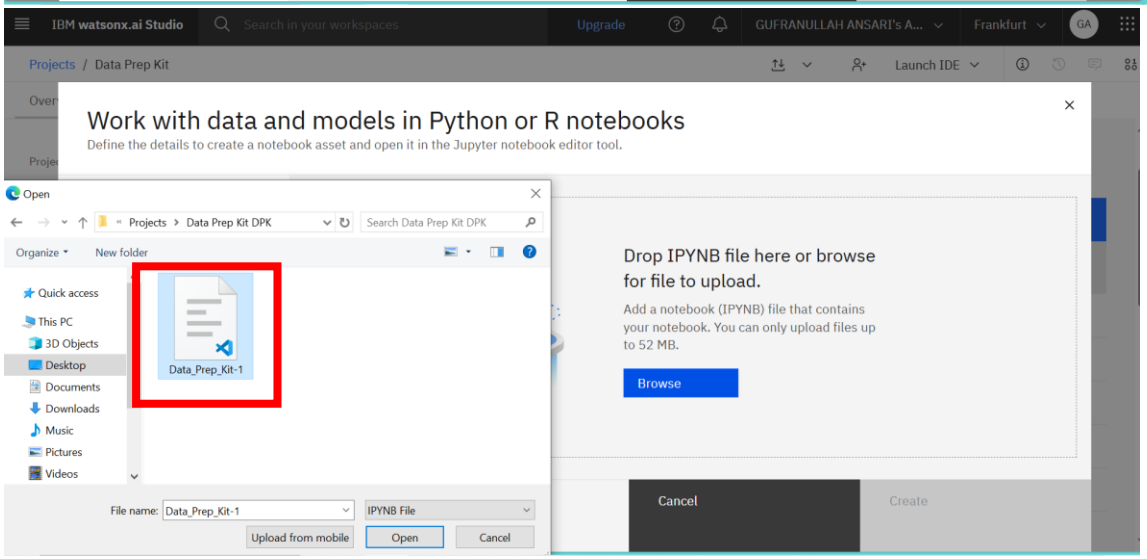


Step 18: Create New notebook

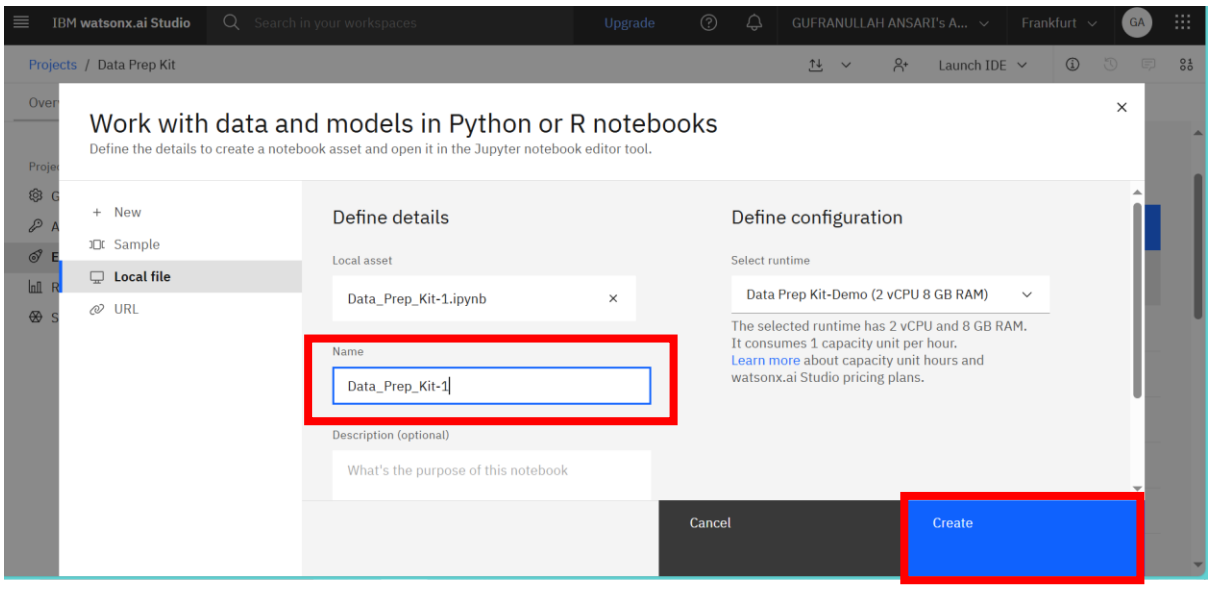


Step 19: Locate file in local drive then browse and upload

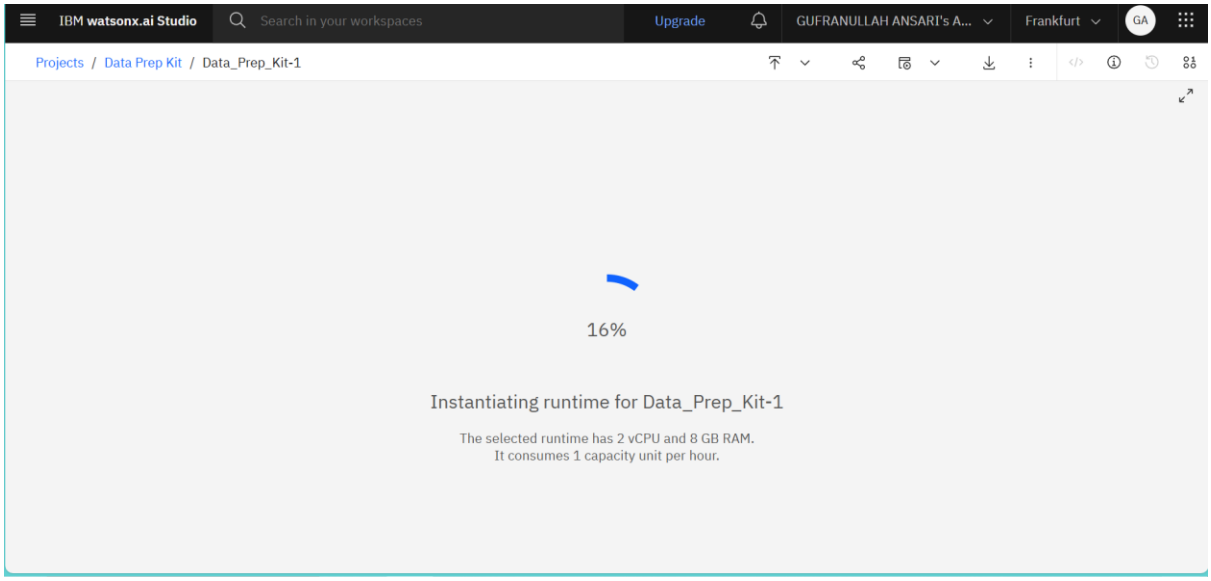




Step 20: Define details and create



Step 21: Wait for 100% to complete and load the Notebook.



Step 21: Now Notebook is ready

Projects / Data Prep Kit / Data_Prep_Kit-1

File Edit View Run Kernel Help

Trusted Memory:2 / 8 GB

Code

Python 3.11

The following notebook example will allow you to test DPK, without cloning the repo. You can run it either on IBM Cloud Jupyter notebook or you can use your local environment (by downloading just the notebook). We use a temporary folder for input and output, but users are encouraged to use their own input folder.

[2]:
```
%%capture
!pip install "data-prep-toolkit-transforms[pdf2parquet]==1.0.0a2"
!pip install pandas
import urllib.request
import shutil
```

Step 22: Run python code

[*]:
```
%%capture
!pip install "data-prep-toolkit-transforms[pdf2parquet]==1.0.0a2"
!pip install pandas
import urllib.request
import shutil
```

[4]:
```
shutil.os.makedirs("tmp/input", exist_ok=True)
urllib.request.urlretrieve("https://raw.githubusercontent.com/IBM/data-prep-kit/dev/transforms/language/pdf2parquet/test-data/input/archive1.zip", "tmp/input/a
urllib.request.urlretrieve("https://raw.githubusercontent.com/IBM/data-prep-kit/dev/transforms/language/pdf2parquet/test-data/input/redp5110-ch1.pdf", "tmp/inp
```

[4]:
```
('tmp/input/redp5110-ch1.pdf', <http.client.HTTPMessage at 0x7f1f1012e150>)
```

[6]:
```
!pip install --upgrade numpy
!pip install --upgrade pandas
```

```
Requirement already satisfied: numpy in /usr/local/lib/python3.11/dist-packages (2.2.4)
Requirement already satisfied: pandas in /usr/local/lib/python3.11/dist-packages (2.2.3)
Requirement already satisfied: numpy>=1.23.2 in /usr/local/lib/python3.11/dist-packages (from pandas) (2.2.4)
Requirement already satisfied: python-dateutil>=2.8.2 in /usr/local/lib/python3.11/dist-packages (from pandas) (2.8.2)
```

[7]:
```
!pip install virtualenv
!virtualenv venv
!source venv/bin/activate
!pip install "data-prep-toolkit-transforms[pdf2parquet]==1.0.0a2" pandas
#Continue with your notebook from here, but ensure you run all installations within the created virtual environment.
```

```
Collecting virtualenv
  Downloading virtualenv-20.29.3-py3-none-any.whl.metadata (4.5 kB)
Collecting distlib<1,>=0.3.7 (from virtualenv)
  Downloading distlib-0.3.9-py2.py3-none-any.whl.metadata (5.2 kB)
Requirement already satisfied: filelock<4,>=3.12.2 in /usr/local/lib/python3.11/dist-packages (from virtualenv) (3.18.0)
Requirement already satisfied: platformdirs<5,>=3.9.1 in /usr/local/lib/python3.11/dist-packages (from virtualenv) (4.3.7)
Downloading virtualenv-20.29.3-py3-none-any.whl (4.3 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 4.3/4.3 MB 37.3 MB/s eta 0:00:00
Downloading distlib-0.3.9-py2.py3-none-any.whl (468 kB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 469.0/469.0 kB 37.5 MB/s eta 0:00:00
Installing collected packages: distlib, virtualenv
Successfully installed distlib-0.3.9 virtualenv-20.29.3
created virtual environment CPython3.11.11.final.0-64 in 894ms
  creator CPython3Posix(dest=/content/venv, clear=False, no_vcs_ignore=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/root/.local/share/virtualenv)
    added seed packages: pip==25.0.1, setuptools==75.8.0, wheel==0.45.1
  activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
Requirement already satisfied: data-prep-toolkit-transforms==1.0.0a2 in /usr/local/lib/python3.11/dist-packages (from data-prep-toolkit-transforms[pdf2parque
t]==1.0.0a2) (1.0.0a2)
Requirement already satisfied: pandas in /usr/local/lib/python3.11/dist-packages (2.2.3)
```

[1]:
```
from dpk_pdf2parquet.transform_python import Pdf2Parquet
from dpk_pdf2parquet.transform import pdf2parquet_contents_types
```

[2]:
```
Pdf2Parquet(input_folder= "tmp/input",
            output_folder= "tmp/output",
            data_files_to_use=['.pdf', '.zip'],
            pdf2parquet_contents_type=pdf2parquet_contents_types.JSON).transform()
```

```
09:19:03 INFO - pdf2parquet parameters are : {'batch_size': -1, 'artifacts_path': None, 'contents_type': <pdf2parquet_contents_types.JSON: 'application/jso
n'>, 'do_table_structure': True, 'do_ocr': True, 'ocr_engine': <pdf2parquet_ocr_engine.EASYOCR: 'easyocr'>, 'bitmap_area_threshold': 0.05, 'pdf_backend': <p
df2parquet_pdf_backend.DLPARSE_V2: 'dlparse_v2'>, 'double_precision': 8}
INFO:dpk_pdf2parquet.transform:pdf2parquet parameters are : {'batch_size': -1, 'artifacts_path': None, 'contents_type': <pdf2parquet_contents_types.JSON: 'a
pplication/json'>, 'do_table_structure': True, 'do_ocr': True, 'ocr_engine': <pdf2parquet_ocr_engine.EASYOCR: 'easyocr'>, 'bitmap_area_threshold': 0.05, 'pd
f_backend': <pdf2parquet_pdf_backend.DLPARSE_V2: 'dlparse_v2'>, 'double_precision': 8}
09:19:03 INFO - pipeline id pipeline_id
INFO:data_processing.runtime.execution_configuration:pipeline id pipeline_id
09:19:03 INFO - code location None
INFO:data_processing.runtime.execution_configuration:code location None
09:19:03 INFO - data factory data_ is using local data access: input_folder - tmp/input output_folder - tmp/output
INFO:data_processing.data_access.data_access_factory_base24f4f209-4dc9-470d-8b10-182b728257bf:data factory data_ is using local data access: input_folder -
tmp/input output_folder - tmp/output
09:19:03 INFO - data factory data_ max_files -1, n_sample -1
```

```
[3]: import pyarrow.parquet as pq
     import pandas as pd
     table = pq.read_table('tmp/output/archive1.parquet')
     table.to_pandas()
```

[3]:

	filename	contents	num_pages	num_tables	num_doc_elements	document_id	document_hash	ext	
0	2305.03393v1-pg9.pdf	{"schema_name":"DoclingDocument","version":"1....	1	1	9	3f8c2d02-fb01-4bc5-8126-ada70eab0296	3463920545297462180	pdf	467dcf637d2efd3f7ad3e
1	2408.09869v1-pg1.pdf	{"schema_name":"DoclingDocument","version":"1....	1	0	12	ec7e5fbe-7e73-4cb7-9847-710a67b806d3	582377908831471240	pdf	8ed0cb6d8767bacf9ce8b

```
[4]: table = pq.read_table('tmp/output/redp5110-ch1.parquet')
     table.to_pandas()
```


```
[4]: table = pq.read_table('tmp/output/redp5110-ch1.parquet')
     table.to_pandas()
```


[4]:

	filename	contents	num_pages	num_tables	num_doc_elements	document_id	document_hash	ext	
0	redp5110-ch1.pdf	{"schema_name":"DoclingDocument","version":"1....	5	0	48	04373e22-bd2f-4c78-898c-1e9caf08b18f	74198560999363607	pdf	572c2937fa0e2659f43d74d1576

Congratulations! You successfully Run Data Prep Kit using IBM Cloud.