PHASE 3: Project Development Part-1

Project title:

Machine learning model deployment with IBM cloud Watson studio

Problem Statement:

Train machine learning models to predict the outcomes in real time. Deploy the models as web services and integrate them into your applications.

Project Overview:

House Price Prediction Analysis aims to use Machine learning analysis algorithms to predict the price of houses based on their features like number of rooms, number of bedrooms, age of the house, population of the respective area where the house is located, location of the house and the area income with other relevant factors if available.By this Machine Learning model user can predict the price of the house that can be sold.

About IBM cloud Watson Studio:

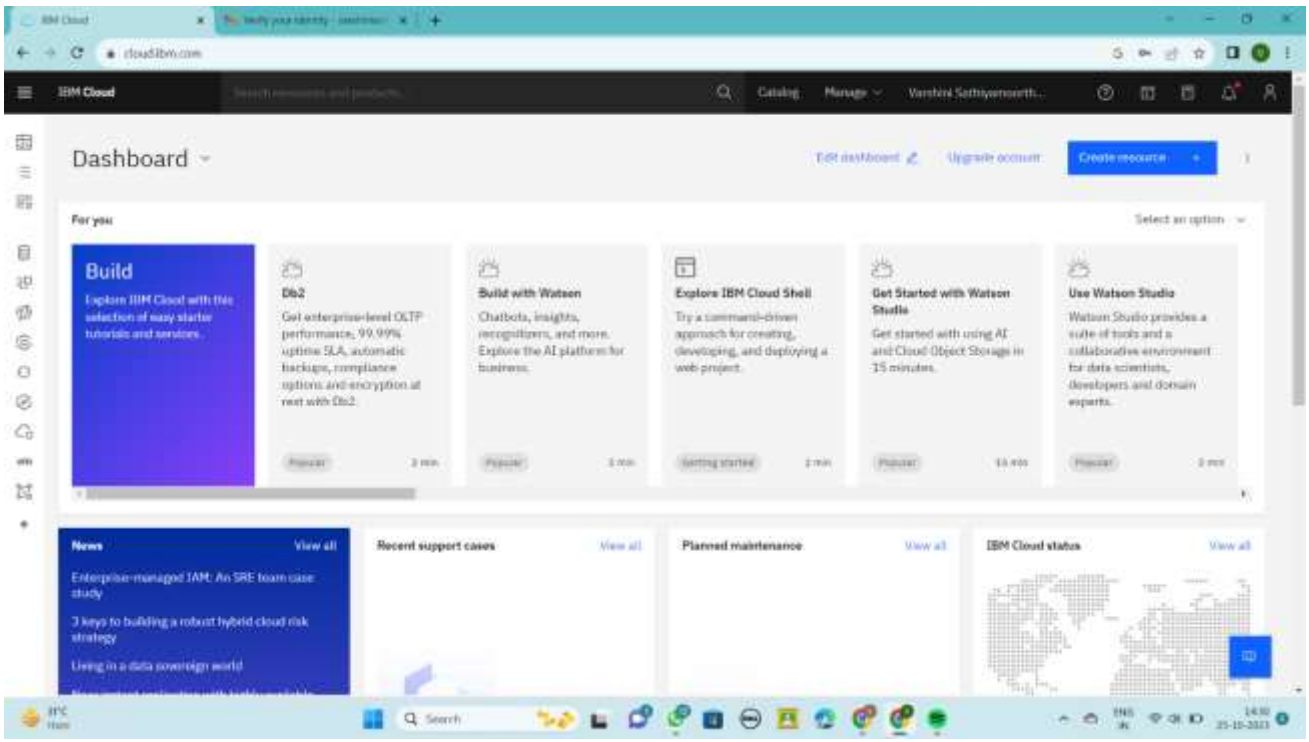
IBM Watson Studio provides tools for data scientists, application developers and subject matter experts to collaboratively and easily work with data to build and train models at scale. It gives us the flexibility to build models where our data

resides and deploy anywhere in a hybrid environment so we can operationalize data science faster.

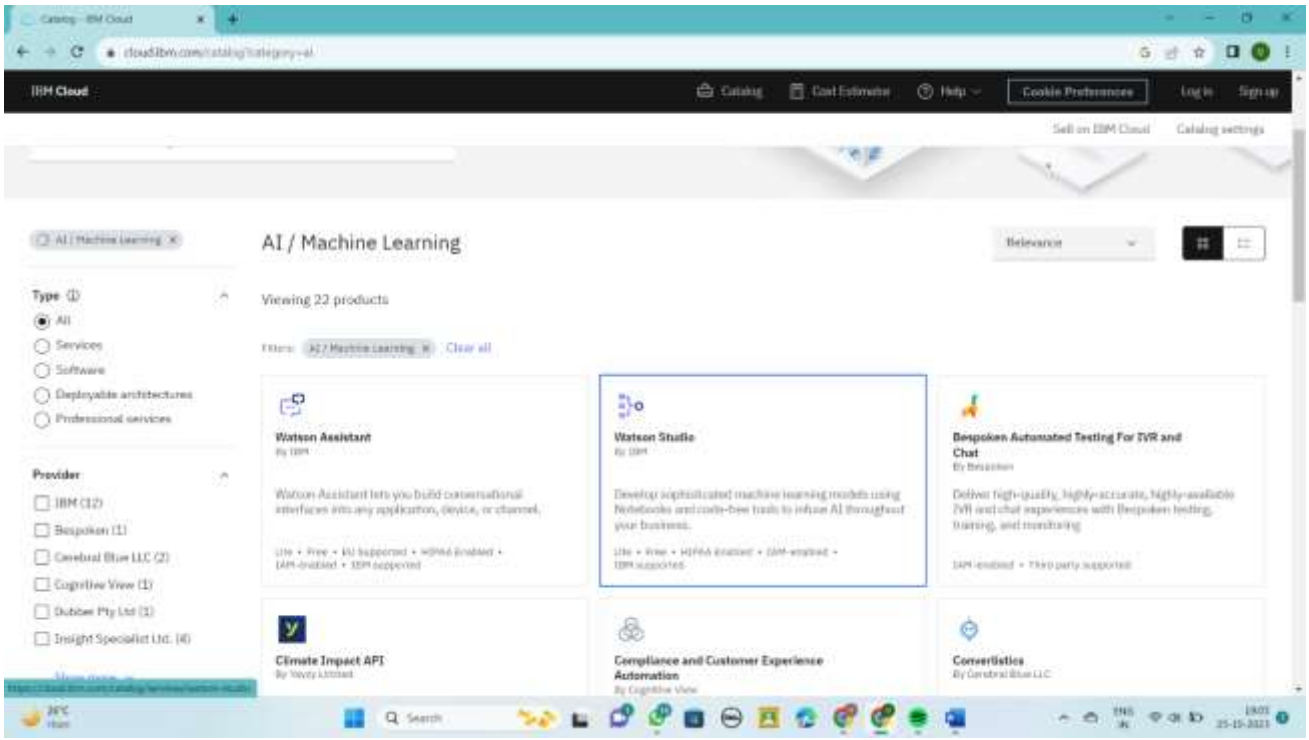
IBM Watson Studio provides various tools for designing, training, and managing machine learning models: **Model builder, Flow editor, Experiment builder, Notebooks, Machine learning command line interface.** Among them, we use notebooks for the working with our dataset.

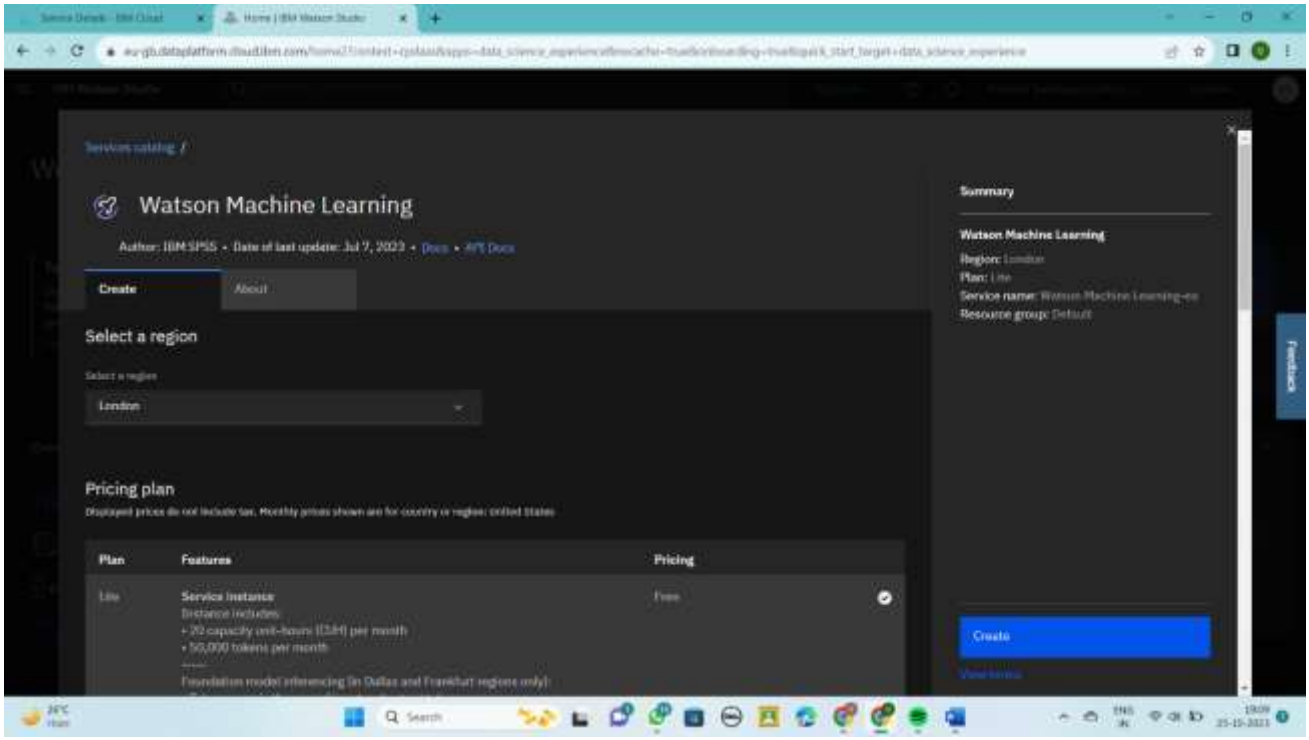
Stepwise procedure for building the machine learning model using IBM Cloud Watson Studio is as follows:

Step1: Login to IBM cloud

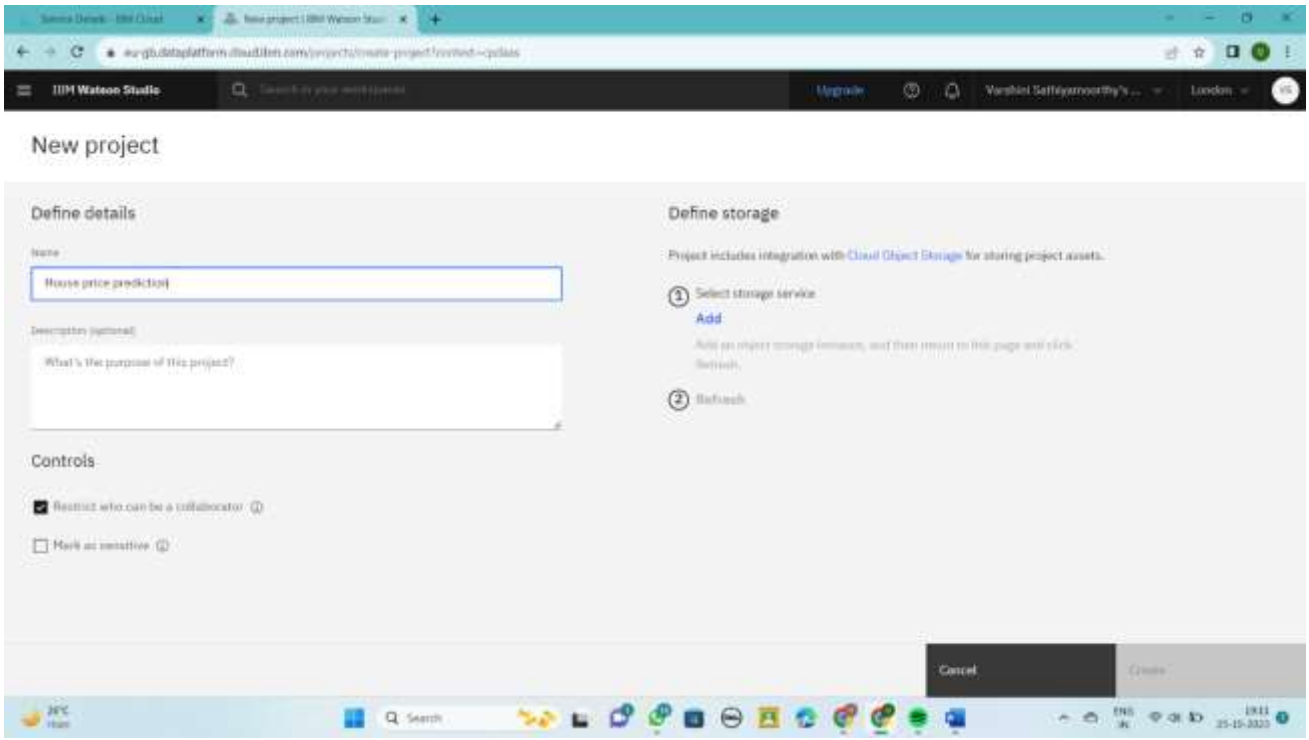


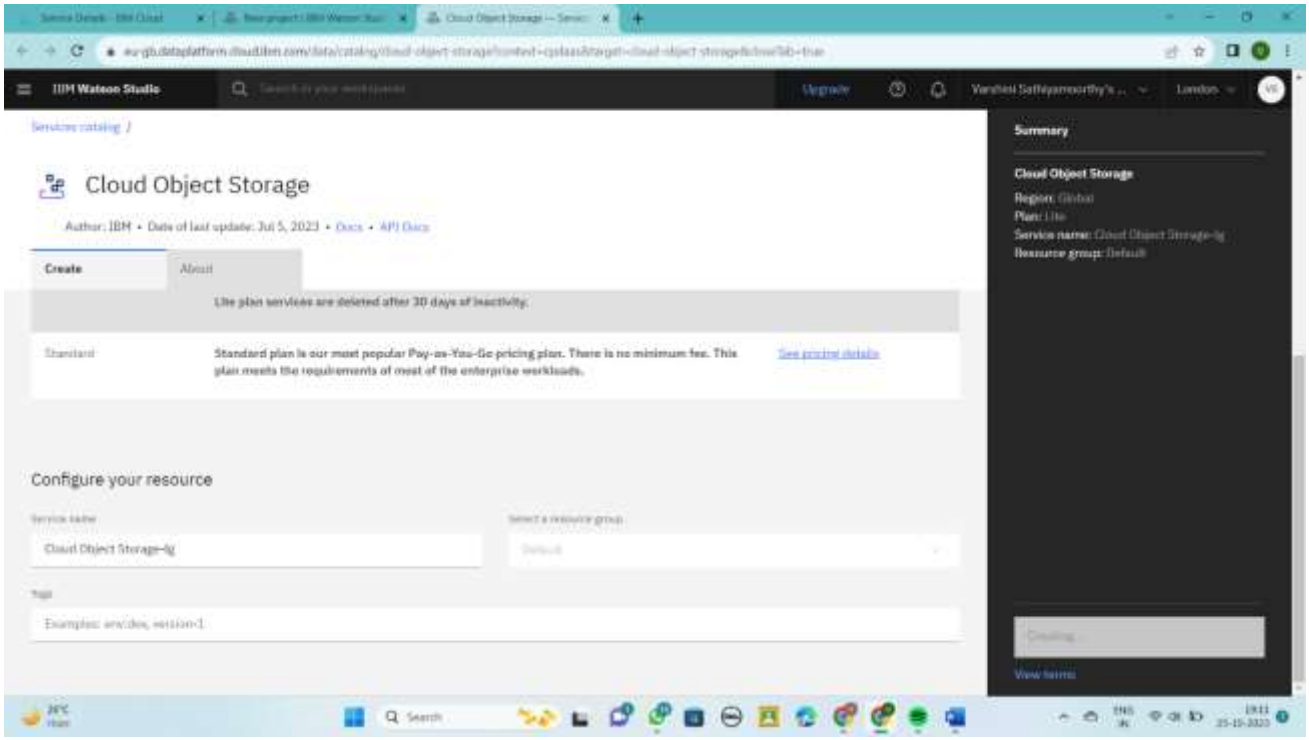
Step 2: Go to catalog and create a Watson Studio service in AI/Machine learning category.

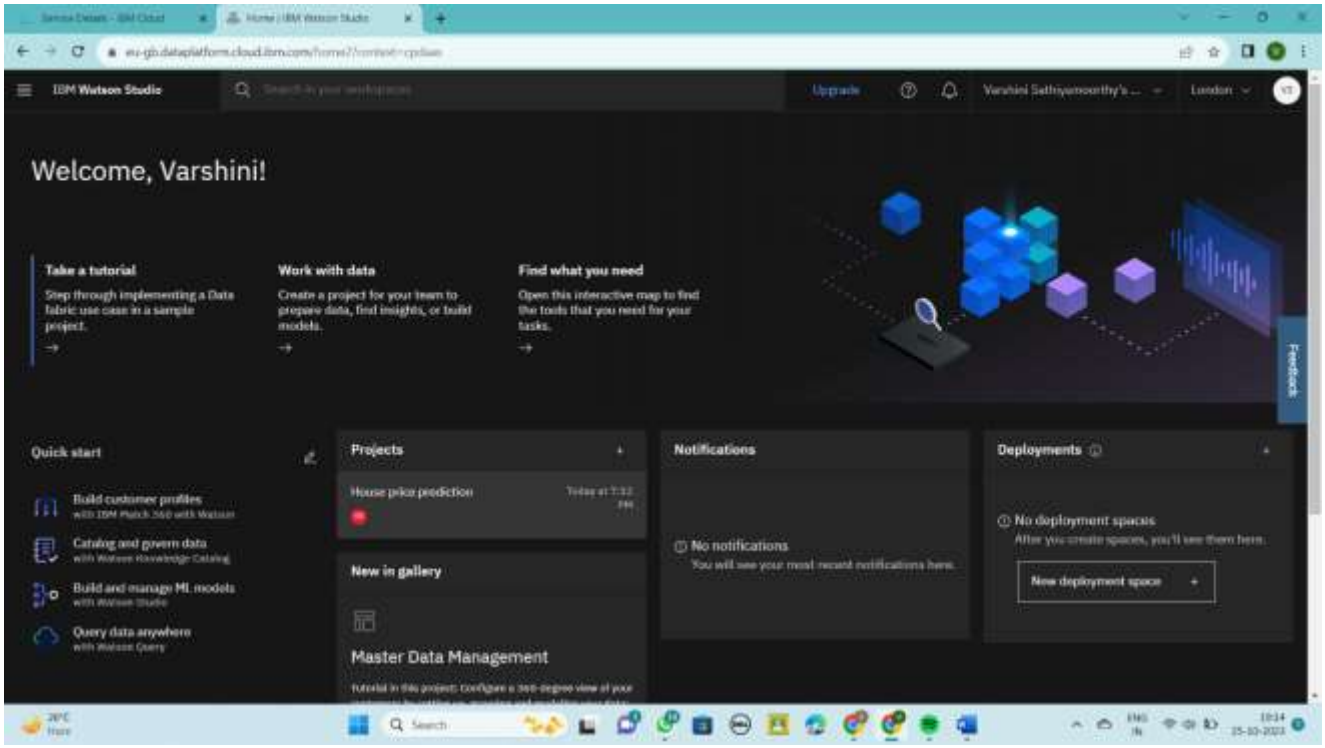




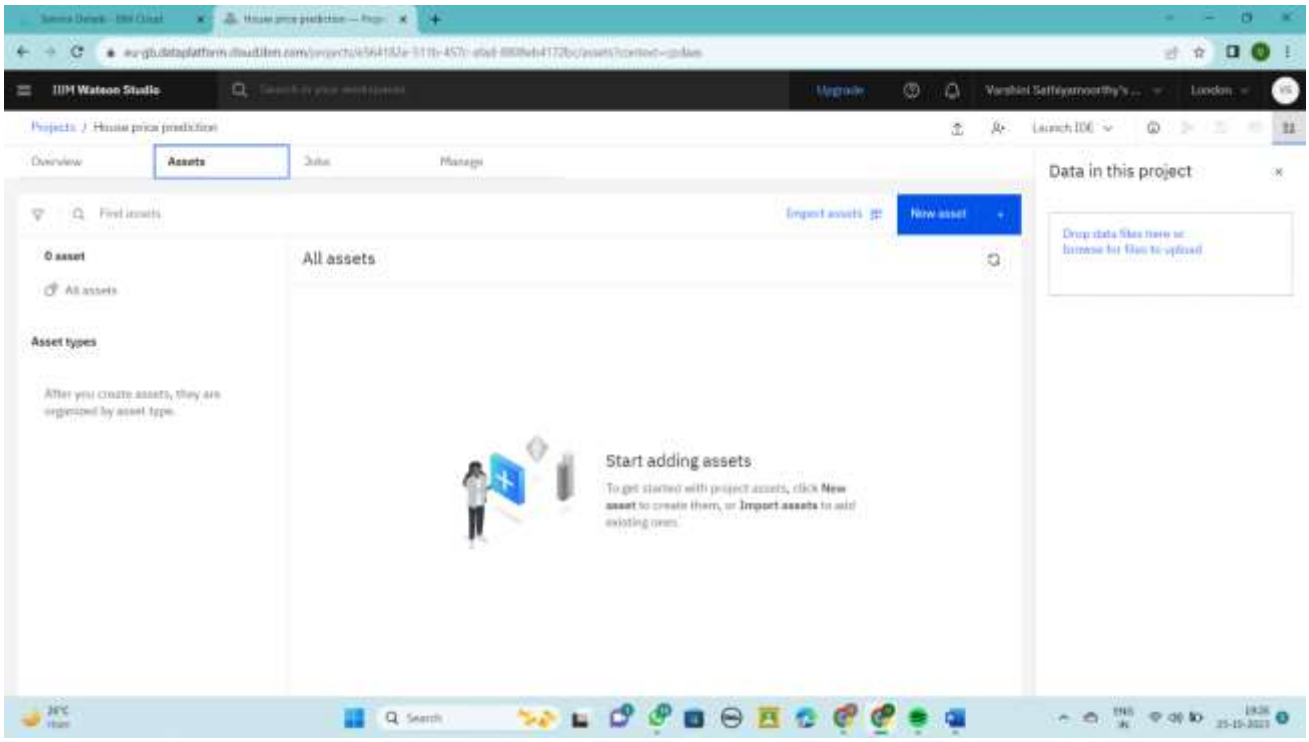
Step 3: Create a project in IBM Watson Studio Dashboard and assign a Cloud object Storage service to manage datasets

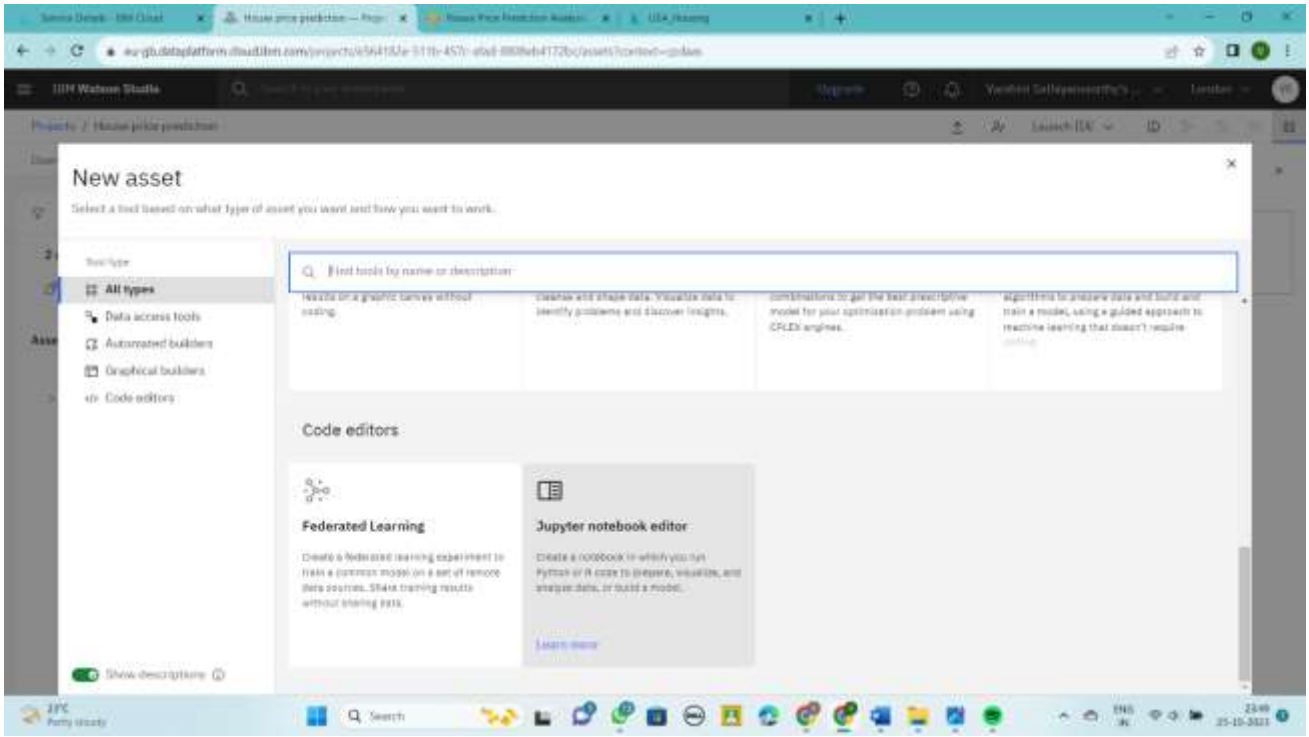


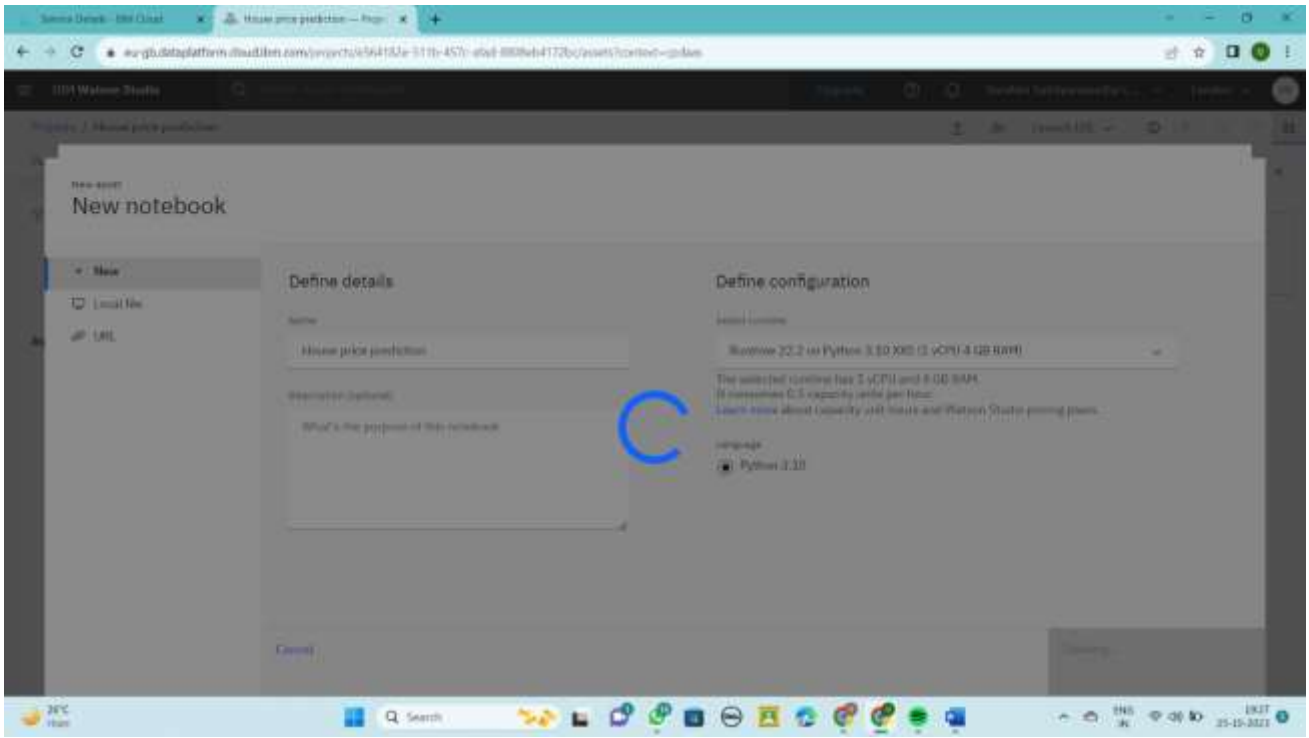




Step 4: Add a jupyter notebook instance in your project to Develop and Deploy Machine Learning Model.

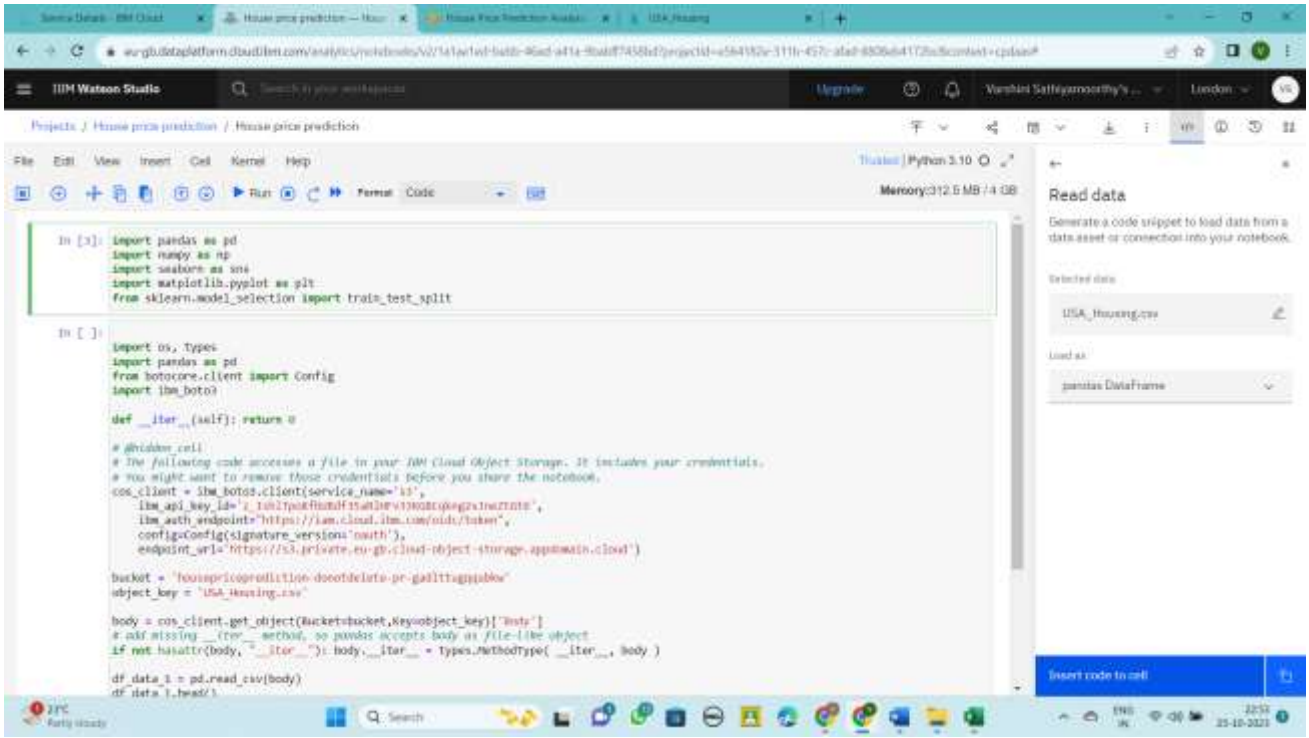


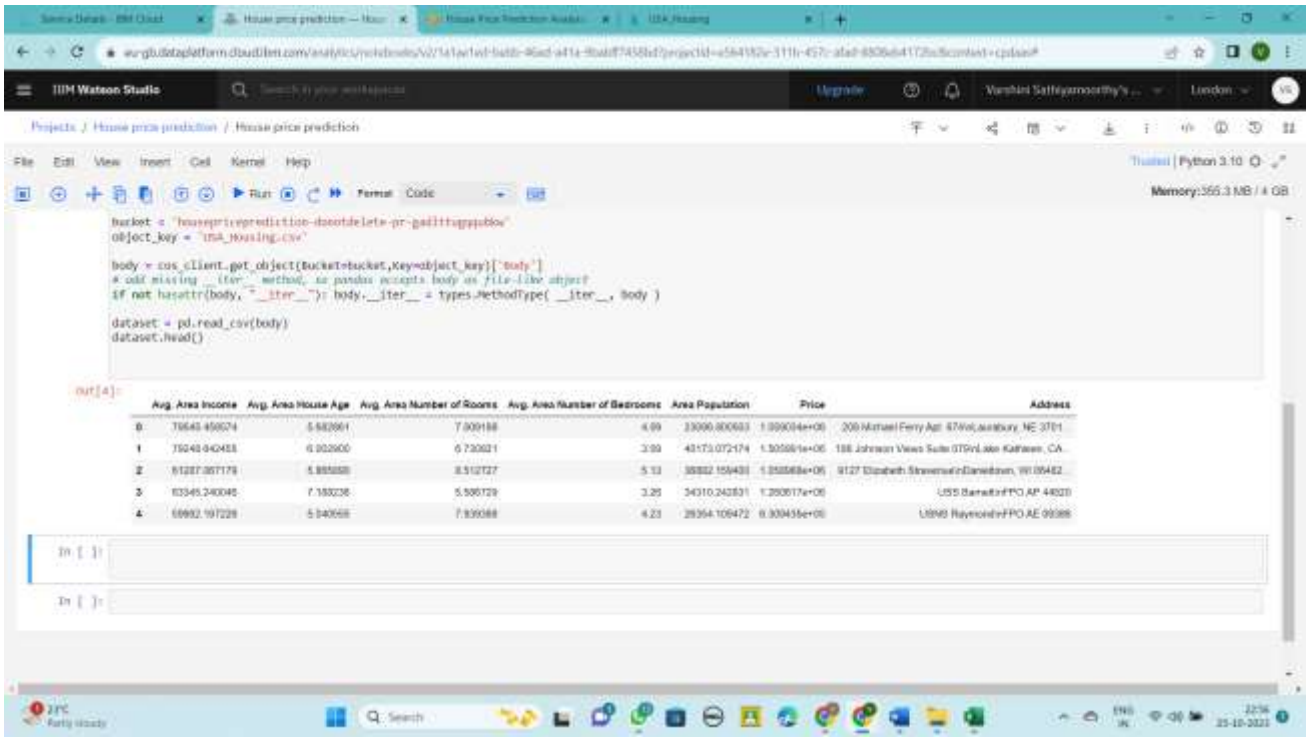




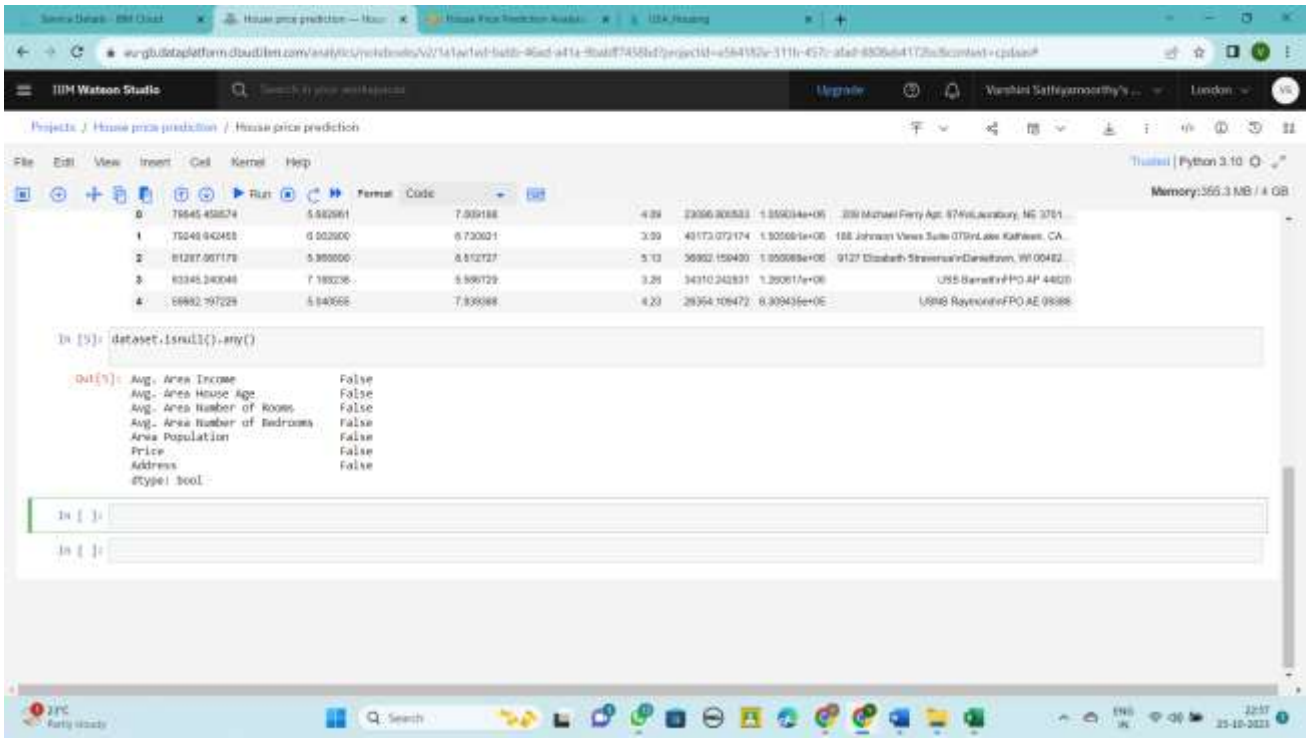
Step 5: Build a machine learning model using jupyter notebook instance.

Import the required libraries. In the next step we are going to upload and insert the dataset for training our Machine Learning model as pandas dataframe.

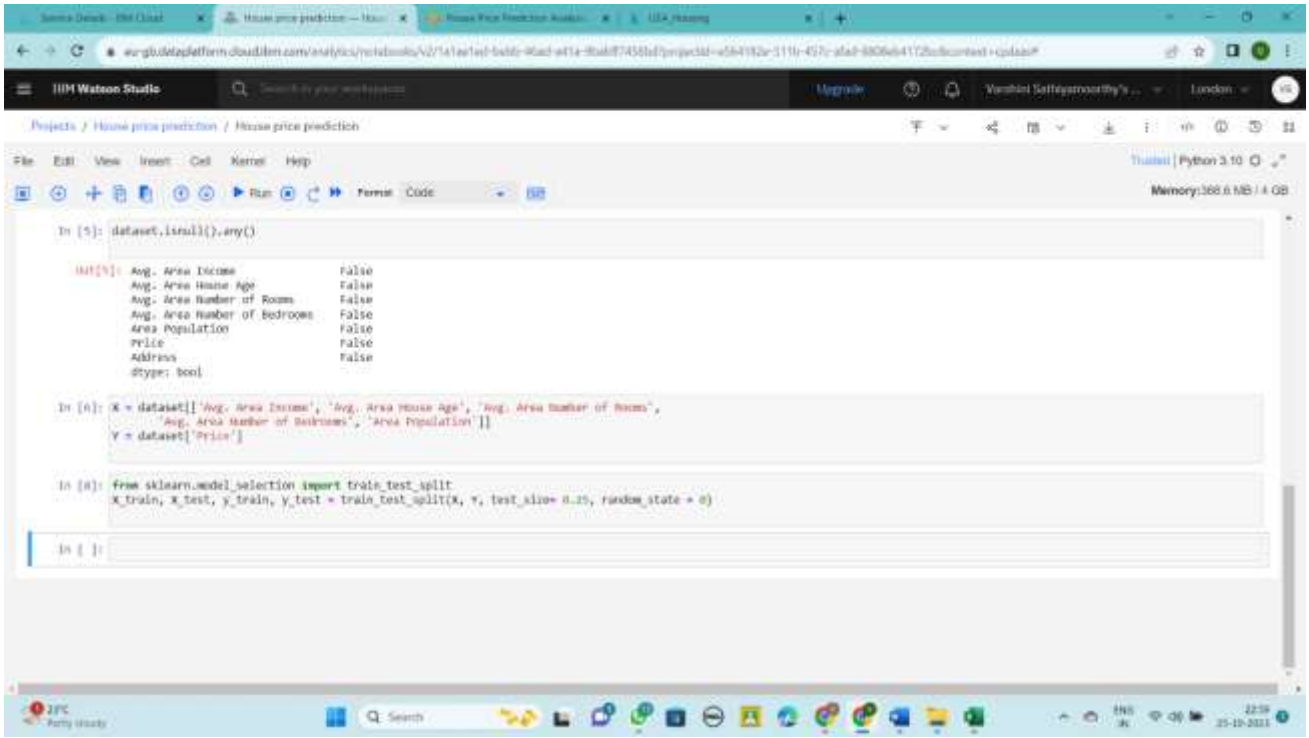




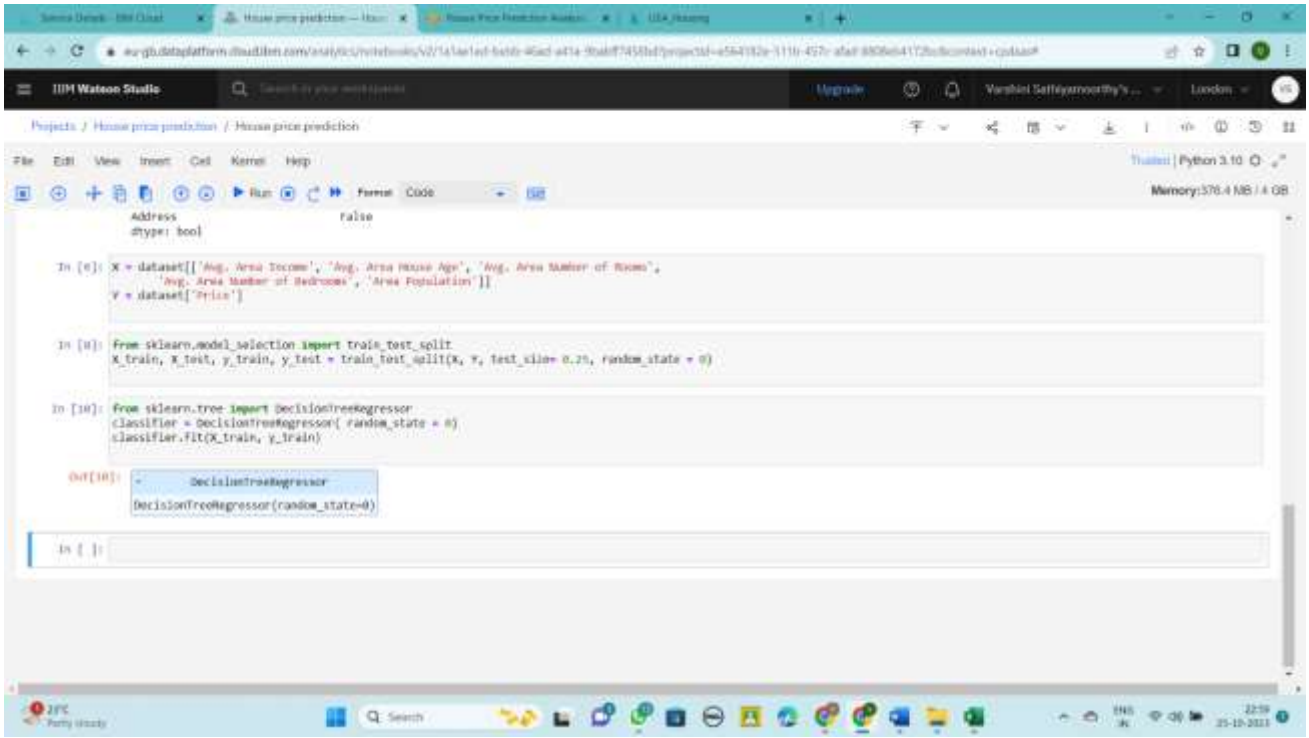
Once the dataset is imported we can proceed further with pre-processing steps and building the model as follows.



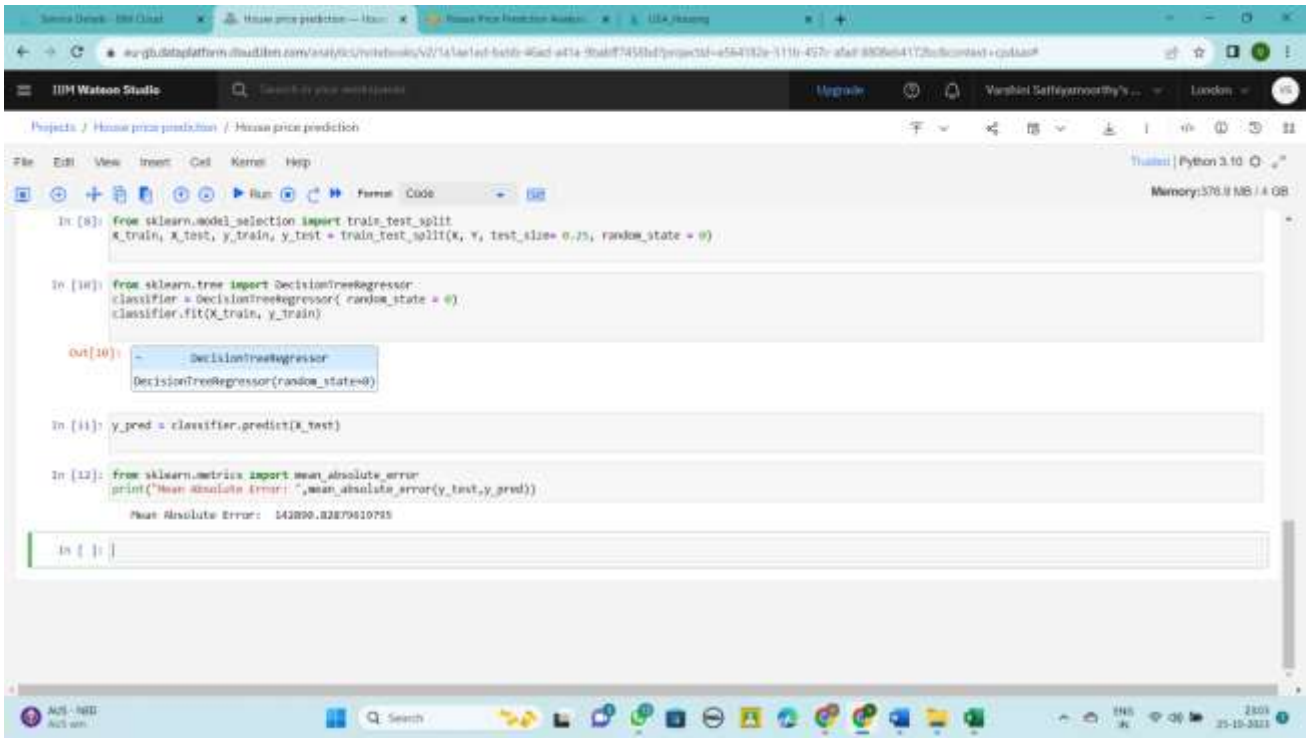
Splitting into training and testing datasets



Fitting Decision Tree Regression to the Training set:



Predicting the Test set results and finding the mean absolute error



Thus the machine learning model was built, trained and tested using IBM Watson Studio.