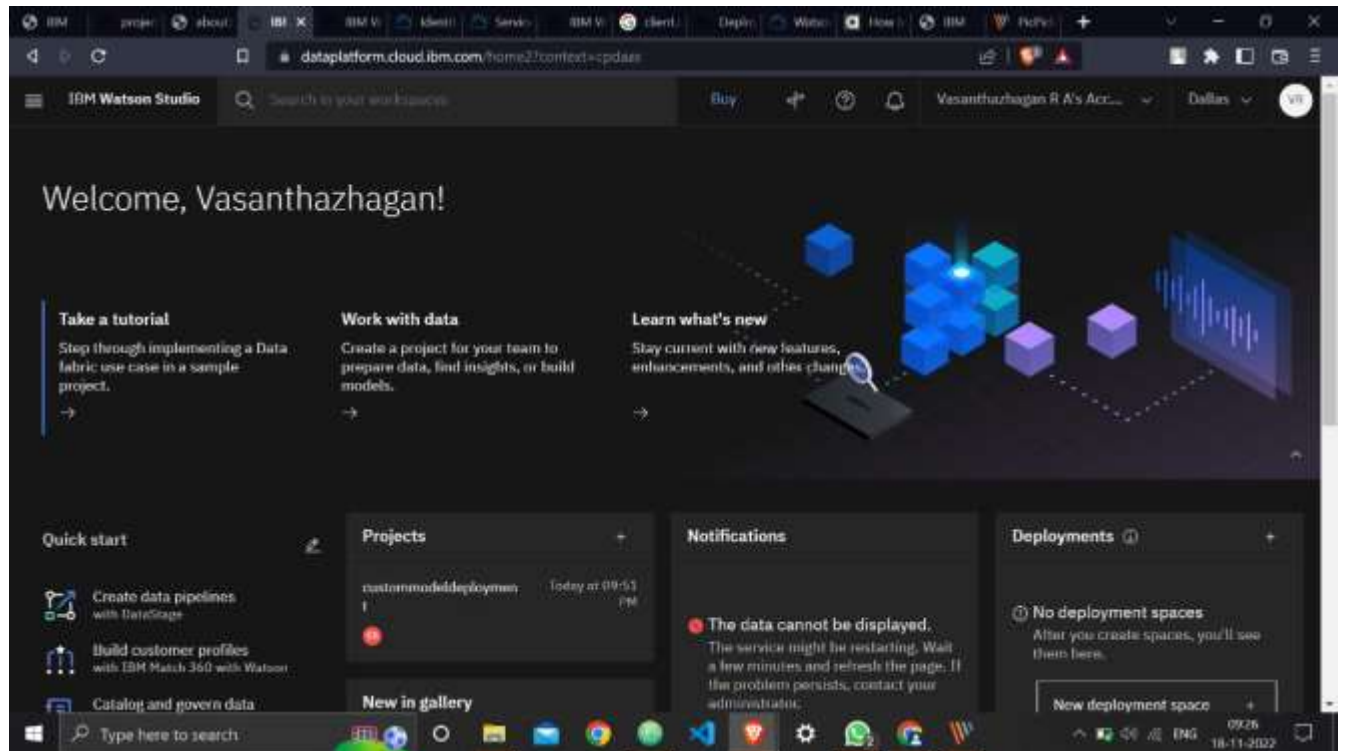


Cloud Project Creation and Deployment



Cloud Project Creation

```

In [21]: import os, sys
import random as rd
import numpy as np
from sklearn.metrics import mean_squared_error, r2_score

def _load_data(filename):
    """Load data from a file.
    If the filename ends with '.csv', it will load the data as a numpy array.
    If the filename ends with '.json', it will load the data as a dictionary.
    If the filename ends with '.pkl', it will load the data as a pickle file.
    """
    if filename.endswith('.csv'):
        data = np.loadtxt(filename, delimiter=',')
    elif filename.endswith('.json'):
        data = json.load(open(filename))
    elif filename.endswith('.pkl'):
        data = pickle.load(open(filename))
    else:
        raise ValueError('Invalid filename: {}'.format(filename))
    return data

def _split_data(data, test_size=0.2, random_state=42):
    """Split the data into training and testing sets.
    """
    X_train, X_test, y_train, y_test = train_test_split(
        data[:, :-1], data[:, -1], test_size=test_size, random_state=random_state)
    return X_train, X_test, y_train, y_test

def _train_model(X_train, y_train):
    """Train a linear regression model.
    """
    model = LinearRegression()
    model.fit(X_train, y_train)
    return model

def _evaluate_model(model, X_test, y_test):
    """Evaluate the model on the testing set.
    """
    y_pred = model.predict(X_test)
    mse = mean_squared_error(y_test, y_pred)
    r2 = r2_score(y_test, y_pred)
    return mse, r2

def _main():
    """Main function to run the program.
    """
    filename = 'data.csv'
    data = _load_data(filename)
    X_train, X_test, y_train, y_test = _split_data(data)
    model = _train_model(X_train, y_train)
    mse, r2 = _evaluate_model(model, X_test, y_test)
    print('MSE: {}, R2: {}'.format(mse, r2))

if __name__ == '__main__':
    _main()

```

Model Building in IBM Cloud