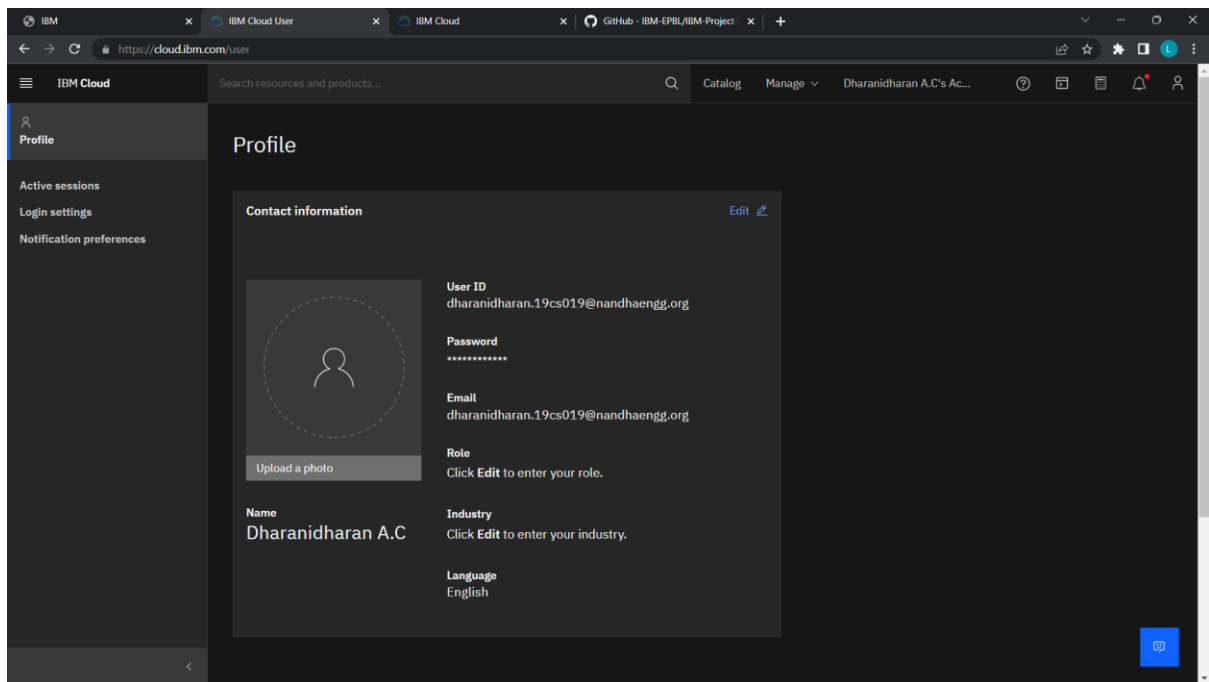
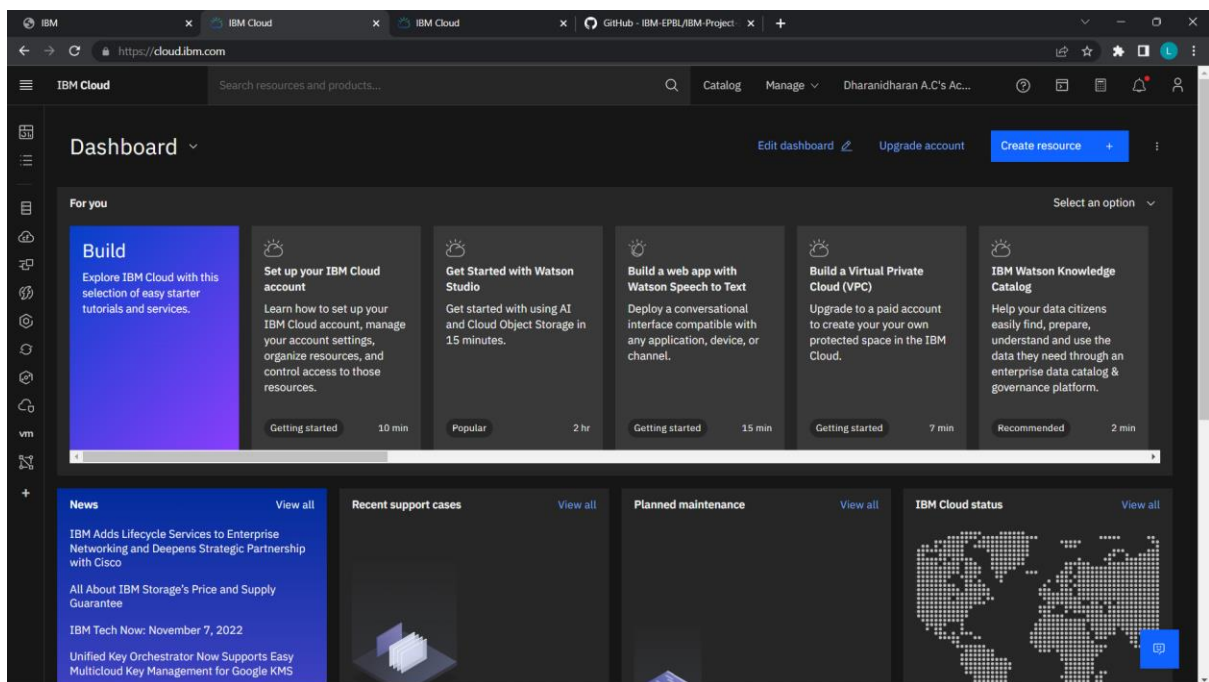


TRAIN THE MODEL ON IBM

1. REGISTER FOR IBM CLOUD



2. TRAIN THE ML MODEL ON IBM



IBM Watson Studio interface showing a data asset named "Pre-Process the Data.ipynb". The asset is located in the "Deployments / CAR RESALE VALUE /" workspace. The summary table provides details about the asset:

Name	Pre-Process the Data.ipynb
ID	32544ad3-f6c6-4453-a569-efd928b66d2e
Date created	Nov 11, 2022, 3:52 PM
Size	48.8 KB
Data source type	IBM Cloud Object Storage
MIME type	application/octet-stream

The data preview section shows the first row of the notebook's output, which is a JSON object containing metadata and code snippets. The code snippets include imports for pandas, numpy, sklearn, and LabelEncoder, as well as a call to the Dataset API.

3. INTEGRATE FLASK WITH SCORING END POINT

IBM Watson Studio interface showing a Jupyter notebook titled "CAR RESALE VALUE PREDICTION". The notebook is located in the "Projects / CAR RESALE VALUE PREDICTION / CAR RESALE VALUE" workspace. The code in the notebook is as follows:

```
In [28]: labels = ['gearbox', 'notRepairedDamage', 'model', 'brand', 'fuelType', 'vehicleType']

In [29]: mapper = {}
for i in labels:
    mapper[i]=LabelEncoder()
    mapper[i].fit(new_df[i])
    tr = mapper[i].transform(new_df[i])
    np.save(str('classes'+i+'.npy'), mapper[i].classes_)
    print(i, ":", mapper[i])
    new_df.loc[:, i + "_labels"] = pd.Series(tr, index=new_df.index)

gearbox : LabelEncoder()
notRepairedDamage : LabelEncoder()
model : LabelEncoder()
brand : LabelEncoder()
fuelType : LabelEncoder()
vehicleType : LabelEncoder()

In [31]: labeled=new_df[ ['price',
                        'yearOfRegistration',
                        'powerPS',
                        'kilometer',
                        'monthOfRegistration'
                        ]
            + [x+"_labels" for x in labels]]

In [32]: print(labeled.columns)

Index(['price', 'yearOfRegistration', 'powerPS', 'kilometer',
      'monthOfRegistration', 'gearbox_labels', 'notRepairedDamage_labels',
      'model_labels', 'brand_labels', 'fuelType_labels',
      'vehicleType_labels'],
      dtype='object')
```