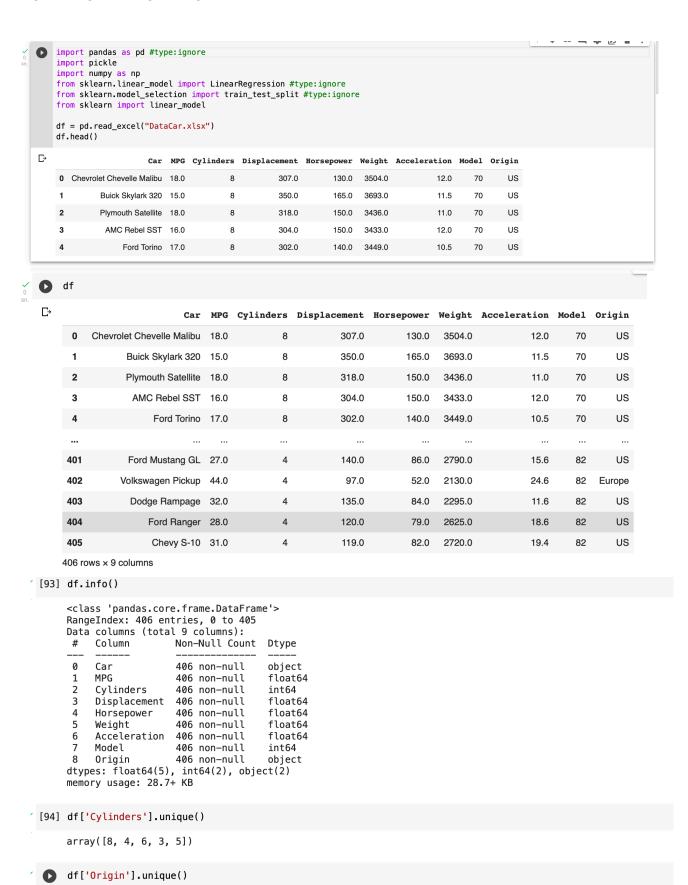
NAME: AİŞE REFİA YILMAZ BATCH CODE: LISUM14

SUBMISSION DATE: DECEMBER 2022 SUBMITTED TO: DATA GLACIER

□→ array(['US', 'Europe', 'Japan'], dtype=object)

CAR PROPERTIES DATASET



```
/ [96] df['Cylinders_int'] = df['Cylinders'].map({'8' : 1, '4' : 2, '6' : 3, '3' : 4, '5': 5})
         df['Origin_int'] = df['Origin'].map({'US' : 1, 'Europe' : 2, 'Japan' : 3})
/ [97] X = df[['MPG', 'Cylinders', 'Horsepower', 'Weight','Acceleration', 'Model']]
         y = df['Displacement']
         X_train, X_test, y_train, y_test = train_test_split(X, y, test_size= 0.3, random_state= 101)
  [98] model = linear_model.LinearRegression()
 [99] model.fit(X_train, y_train)
         print(model.score(X_train, y_train))
         0.9562997940025586
   prediction_test = model.predict(X_test)
        print(y_test, prediction_test)
        print("Predict = ", np.mean(prediction_test-y_test)**2)
    [→ 195
                318.0
        43
                250.0
        98
                400.0
        204
                90.0
        295
               318.0
        16
                340.0
        31
                360.0
        36
                140.0
                225.0
        41
                97.0
        Name: Displacement, Length: 122, dtype: float64 [347.886696 225.93577274 365.46735442 91.83822588 319.15906196
         116.51162317 215.60248611 275.97382561 91.21097748 315.29158902 73.14552449 95.16587383 77.81838705 166.34316899 114.81185313
         228.40833769 353.22275783 128.78583984 133.25041684 73.442575
122.00508427 315.44359102 177.78436643 235.4199805 211.91201271
205.87581219 222.07420085 148.80237955 88.57860347 97.76523848
                                                                  97.76523848
          88.07811476 239.29938481 305.65901654 126.00117146 347.48073301
          86.2224578 388.25493164 201.4754791 134.29794271 90.36566834
         132.95818941 94.02478911 247.95912679 119.03939848 82.29766113 92.30146999 73.82025463 167.35996073 122.57829315 102.46146663
         75.18128326 216.30993894 346.67131763 212.63509573 99.85382472 124.98106297 346.90463389 107.9556231 111.79833947 91.66537581
         352.39414421 205.18701131 128.02292116 409.84285691 316.30270777
         125.5592351 113.10132636 199.41804754 77.01584626 109.98463773
         229.01701638 100.10239403 119.3375582
                                                   89.30879934 82.16113494
         99.65771322 345.87116891 336.29625868 329.19220319 124.29057189 352.1261212 342.63182864 208.90879984 348.72836975 366.95101609
         304.79842497 347.90970917 110.79607865 91.05230148 317.32805522
          81.75908099 99.1544662 362.48344458 214.87259112 108.03810893
          305.07768115 199.71741143 359.52824079 138.48117931 89.12535714
           124.26116139 84.40000115 242.53634545 89.07310196 206.05364374
           113.79970156 215.58004389 62.25383113 335.0858802 253.05397419
           352.51140741 76.75862885 338.7930017
                                                                 98.10797049 209.9121741
           241.04962585 310.91545265 332.7387107 385.47874379 115.42562729
          235.35703673 109.91535644]
         Predict = 1.225941524448503
/ [106] pickle.dump(model, open('model.pkl', 'wb'))
/ [107] model = pickle.load(open('model.pkl', 'rb'))
```

DEPLOY THE MODEL ON FLASK

```
import numpy as np
from flask import Flask, request, render_template #type:ignore
import pickle
app = Flask( name )
model = pickle.load(open('models/model.pkl', 'rb'))
@app.route('/')
def home():
   return render template('index.html')
@app.route('/predict',methods=['POST'])
    int_features = [float(x) for x in request.form.values()]
    features = [np.array(int_features)]
    prediction = model.predict(features)
    output = round(prediction[0], 2)
    return render_template('index.html', prediction_text='Prediction Horsepower {}'.format(output))
if name == " main ":
   app.run()
```

```
(base) Aise-MacBook-Pro:downloads bulut$ python model.py
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 406 entries, 0 to 405
Data columns (total 9 columns):
#
     Column
                     Non-Null Count Dtype
0
                     406 non-null
                                       object
                     406 non-null
                                       float64
     Cvlinders
                     406 non-null
                                       int64
     Displacement 406 non-null
                                       float64
     Horsepower
                     406 non-null
                                       float64
     Weight
                     406 non-null
                                       float64
     Acceleration 406 non-null
                                       float64
     Model
                     406 non-null
                                       int64
                     406 non-null
 8
     Origin
dtypes: float64(5), int64(2), object(2)
memory usage: 28.7+ KB
0.9562997940025587
195
       318.0
43
       250.0
98
       400.0
204
        90.0
295
       318.0
       340.0
16
31
       360.0
36
       140.0
41
       225.0
24
        97.0
Name: Displacement, Length: 122, dtype: float64 [347.886696
                                                                    225.93577274 365.46735442 91.83822588 319.15906196
 116.51162317 215.60248611 275.97382561 91.21097748 315.29158902 73.14552449 95.16587383 77.81838705 166.34316899 114.81185313
 228.40833769 353.22275783 128.78583984 133.25041684 73.442575
 122.00508427 315.44359102 177.78436643 235.4199805 211.91201271
 205.87581219 222.07420085 148.80237955 88.57860347 97.76523848
  88.07811476 239.29938481 305.65901654 126.00117146 347.48073301
 86.2224578 388.25493164 201.4754791 134.29794271 90.36566834 132.95818941 94.02478911 247.95912679 119.03939848 82.29766113 92.30146999 73.82025463 167.35996073 122.57829315 102.46146663
  75.18128326 216.30993894 346.67131763 212.63509573 99.85382472
 124.98106297 346.90463389 107.9556231 111.79833947 91.66537581
 352.39414421 205.18701131 128.02292116 409.84285691 316.30270777
 125.5592351 113.10132636 199.41804754 77.01584626 109.98463773 229.01701638 100.10239403 119.3375582 89.30879934 82.16113494
  99.65771322 345.87116891 336.29625868 329.19220319 124.29057189
 352.1261212 342.63182864 208.90879984 348.72836975 366.95101609
 304.79842497 347.90970917 110.79607865 91.05230148 317.32805522
  81.75908099 99.1544662 362.48344458 214.87259112 108.03810893
 305.07768115 199.71741143 359.52824079 138.48117931 89.12535714
 124.26116139 84.40000115 242.53634545 89.07310196 206.05364374
 113.79970156 215.58004389 62.25383113 335.0858802 253.05397419
 352.51140741 76.75862885 338.7930017
                                             98.10797049 209.9121741
 241.04962585 310.91545265 332.7387107 385.47874379 115.42562729
 235.35703673 109.91535644]
Predict = 1.2259415244493959
```

```
bash: export: `Code.app/Contents/Resources/app/bin:/Applications/Visual': not a valid identifier bash: export: `Code.app/Contents/Resources/app/bin': not a valid identifier

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
(base) Aise-MacBook-Pro:Week4-Data-Glacier bulut$ python app.py

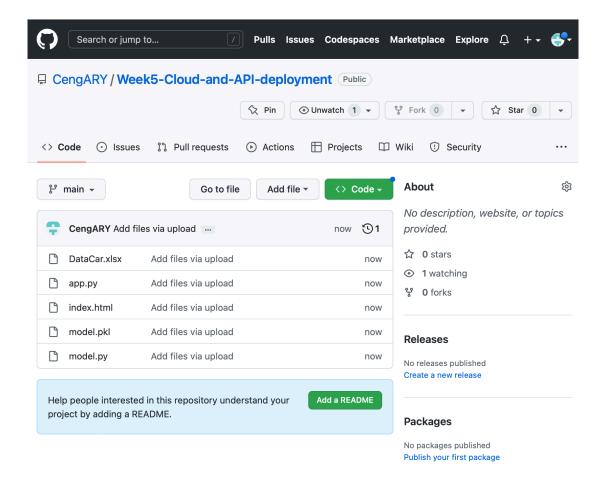
* Serving Flask app "app" (lazy loading)

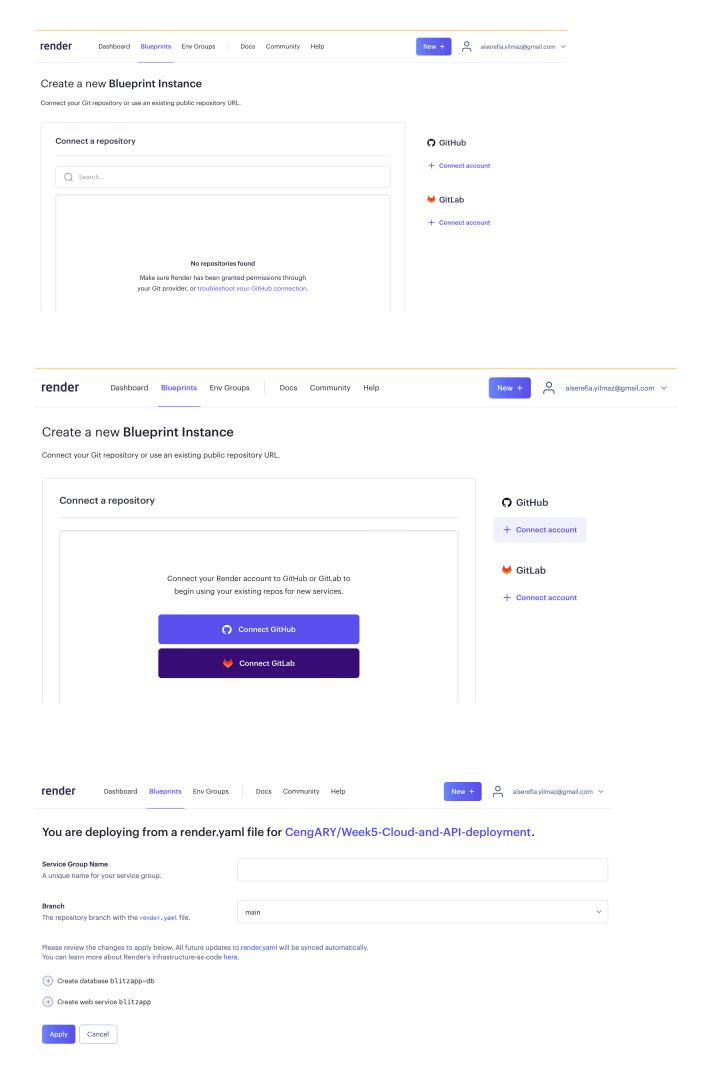
* Environment: production

WARNING: This is a development server. Do not use it in a production deployment.

Use a production WSGI server instead.

* Debug mode: off
```







You are deploying from a render.yaml file for CengARY/Week5-Cloud-and-API-deployment.

Service Group Name A unique name for your service group.	car-properties	
Branch The repository branch with the render.yaml file.	main	,
Please review the changes to apply below. All future updates to render.yaml will be synced automatically. You can learn more about Render's infrastructure-as-code here.		
Create web service blitzapp		