

APPLICATION BUILDING

Date	27 October 2022
Team ID	PNT2022TMID40130
Project Name	Car Resale value Prediction

Build The Python Flask App

#Importing required libraries

```
import pandas as pd
import numpy as np
from flask import Flask, render_template, Response, request
import pickle
from sklearn.preprocessing import LabelEncoder
import pickle
```

#Load the model and initialize Flask app

```
app=Flask(__name__)
filename='resale_model.sav'
model_rand=pickle.load(open(filename,'rb'))
```

#Configure app.py to fetch the parameter values from the ui,and return the prediction

```
@app.route('/')
def index():
    return render_template('resaleintro.html')

@app.route('/predict')
def predict():
    return render_template('resalepredict.html')
```

```

@app.route(y_predict', methods=['GET', 'POST'])
def y_predict():

    regyear = int (request.form['regyear'])

    powerps = float(request.form['powerps'])

    kms = float(request.form['kms'])

    regmonth = int(request.form.get('regmonth'))

    gearbox = request.form['gearbox']

    damage = request.form['dam']

    model = request.form.get('modeltype') brand= request.form.get('brand')

    fuelType = request.form.get('fuel') vehicleType= request.form.get('vehicletype')

    new_row("yearOfRegistration":regyear, 'powerPS':powerps, 'kilometer':kms,
    monthofRegistration': regmonth, gearbox = gearbox, 'notRepairedDamage': damage,
    'model':model, 'brand':brand, 'fuelType': fuelType,
    'vehicleType': vehicleType)

    print(new_row)

    new_df = pd.DataFrame(columns =['vehicleType', 'yearOfRegistration', 'gearbox', 'powerPS', 'model',
    'kilometer', 'monthofRegistration', 'fuelType', 'brand', 'notRepairedDamage'])

    new_df= new_df.append(new_row, ignore_index= True)

    labels = ['gearbox', 'notRepairedDamage', 'model', 'brand', 'fuelType', 'vehicleType']

    mapper = {}

    for i in labels:

        mapper[i] = LabelEncoder()

        mapper[i].classes_ = np.load(str('classes'+i+'.npy'))

        tr= mapper[i].fit_transform(new_df[i])

        new_df.loc[:, i +'_labels'] = pd.Series (tr, index=new_df.index)

    labeled = new_df[ ['yearOfRegistration', 'powerPS', 'kilometer', 'monthOfRegistration']+['x'+'_labels' for x in
    labels]]
    X=labeled.values
    print(X)

```

```
y_prediction=model.rand.predict(X)
print(y_prediction)
return render_template('resalespredict.html',ypred = 'The resale value predicted is
 {:.2f}$'.format(y_prediction[0]))
```

Run the app

```
If __name__ == '__main__':
    app.run(host='localhost', debug = True, threaded = False)
```