In [656]:
```
prediction = model.predict(x)
prediction
```

Out[656]:
```
array([5941.22175259, 6513.63305302, 5082.60480194, ..., 5569.15440731,
       5368.81045215, 6799.83870324])
```

In [657]:
```
model.predict([[10000]]).round(0)
```

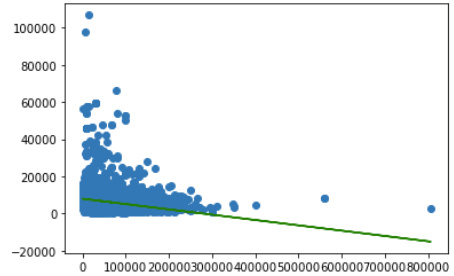
Out[657]:
```
array([7658.])
```

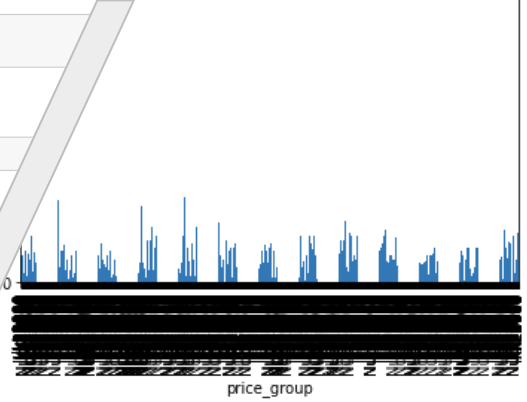
In [658]:
```
r_squared = model.score(x, y)
r_squared
```

Out[658]:
```
0.036974943094581936
```

In [659]:
```
plt.scatter(x, y)
plt.plot(x, prediction, 'green')
```

Out[659]:
```
[<matplotlib.lines.Line2D at 0x1b1f3962af0>]
```






```
                                    2000:
                                    < 3000:
                                    3"
                                    x < 4000:
                                    000"
                                    nd x < 5000:
                                    5000"
                                    and x < 7000:
                                    ki 7000"
                                    00 and x < 10000:
                                    "Iki 10000"
                                    10000 and x < 20000:
                                    n "Iki 20000"

                                    urn "Nuo 20000"

                                    vektorizuoti = np.vectorize(if_salygos)
                                    ti = reiksmes_vektorizuoti(car['price_EUR'])

                                    rice_group'] = sugrupuoti
```

	year	selling_price	km_driven	fuel	seller_type	transmission	owner	make	price_EUR	price_group
	2007	60000	70000	Petrol	Individual	Manual	First Owner	Maruti	720.0	Iki 1000
	2007	135000	50000	Petrol	Individual	Manual	First Owner	Maruti	1620.0	Iki 2000
2	2012	600000	100000	Diesel	Individual	Manual	First Owner	Hyundai	7200.0	Iki 10000
3	2017	250000	46000	Petrol	Individual	Manual	First Owner	Datsun	3000.0	Iki 4000
4	2014	450000	141000	Diesel	Individual	Manual	Second Owner	Honda	5400.0	Iki 7000
...	...	...	...	...	...	...	...	...	...	...
4335	2014	409999	80000	Diesel	Individual	Manual	Second Owner	Hyundai	4920.0	Iki 5000
4336	2014	409999	80000	Diesel	Individual	Manual	Second Owner	Hyundai	4920.0	Iki 5000
4337	2009	110000	83000	Petrol	Individual	Manual	Second Owner	Maruti	1320.0	Iki 2000
4338	2016	865000	90000	Diesel	Individual	Manual	First Owner	Hyundai	10380.0	Iki 20000
4339	2016	225000	40000	Petrol	Individual	Manual	First Owner	Renault	2700.0	Iki 3000

5 Hipotezė 4

Jei pirkėjas turi iki 3 k EUR, reikėtų tikėtis automobilio su "mechanin

(Visiškai nepasitvirtino)

In [624]:
```
car.head(1)
```

2 Hipotezė 1

Daugiau kaip 50 K km nuvažiavę bei turintys "mechaninę" pavarų dėžę automobiliai yra pigesni.

(Nepasitvirtino)

In [646]:
```
car.head(1)
```

Out[646]:

	year	selling_price	km_driven	fuel	seller_type	transmission	owner	make	price_EUR	pr
0	2007	60000	70000	Petrol	Individual	Manual	First Owner	Maruti	720.0	

In [668]:
```
car[car['km_driven'] >= 50000].groupby(['price_group', 'transmission'])['
```

Out[668]:
```
price_group  transmission
Iki 1000     Automatic        1
             Manual         192
Iki 10000    Automatic       22
             Manual         282
Iki 2000     Automatic       11
             Manual         514
Iki 20000    Automatic       62
             Manual         105
Iki 3000     Automatic        9
             Manual         376
Iki 4000     Automatic       13
             Manual         408
Iki 5000     Automatic       13
             Manual         263
Iki 7000     Automatic       16
             Manual         368
Nuo 20000    Automatic       37
             Manual           5
Name: price_EUR, dtype: int64
```

```
t as plt
mport Path
es import PathPatch
s
_model import LinearRegression
r_model import LogisticRegression
rt metrics
```

sudaro 1992-2020 m. auto pardavimų duomenys Delyje

giau kaip 50 K km nuvažiavę bei turintys "mechaninę" pavarų dėžę automobiliai yra pigesni. (Nepasitvirtino).
dividualūs savininkai automobilius parduoda pigiau (mažiau reklamos, nesuteikia garantijos, patikimumas ir kt.). (Visiškai
Norint įsigyti automobilį nuvažiavusį ne daugiau 50 K km ir ne senesnį kaip 3 metų amžiaus, dažniausiai reikia "pasiruoši
siai taip).
ė. Jei pirkėjas turi iki 3 k EUR, reikėtų tikėtis automobilio su "mechanine" pavarų dėže ir nuvažiavusio bent 100 k km. (Vis
lio atveju).
nozė. Vertinant automobilio ridą, kokia turėtų būti jo kaina.

```
car_deho_india = pd.read_csv('car_deho_india_original.csv')
car = car_deho_india.dropna()
car
```

	name	year	selling_price	km_driven	fuel	seller_type	transmission	owner
0	Maruti 800 AC	2007	60000	70000	Petrol	Individual	Manual	First Owne
1	Maruti Wagon R LXI Minor	2007	135000	50000	Petrol	Individual	Manual	First Ow
2	Hyundai Verna 1.6 SX	2012	600000	100000	Diesel	Individual	Manual	First O
3	Datsun RediGO T Option	2017	250000	46000	Petrol	Individual	Manual	First
4	Honda Amaze VX i-DTEC	2014	450000	141000	Diesel	Individual	Manual	Seco
...	...	...	...	...	...	...	...	
4335	Hyundai i20 Magna 1.4 CRDi (Diesel)	2014	409999	80000	Diesel	Individual	Manual	
4336	Hyundai i20 Magna 1.4 CRDi	2014	409999	80000	Diesel	Individual	Manual	

```
                                    1
                                    1
                                    ..
ol Highline AT                      2
n                                   1
ription BSIV                        1
tic                                 1
cription                            1
th: 1491, dtype: int64
```

```
'name', axis=1, inplace=True)
```

	selling_price	km_driven	fuel	seller_type	transmission	owner	make
	60000	70000	Petrol	Individual	Manual	First Owner	Maruti
07	135000	50000	Petrol	Individual	Manual	First Owner	Maruti
2012	600000	100000	Diesel	Individual	Manual	First Owner	Hyundai
2017	250000	46000	Petrol	Individual	Manual	First Owner	Datsun
4	2014	450000	141000	Diesel	Individual	Manual	Second Owner	Honda
...	...	...	...	...	...	...	...	...
4335	2014	409999	80000	Diesel	Individual	Manual	Second Owner	Hyundai
4336	2014	409999	80000	Diesel	Individual	Manual	Second Owner	Hyundai
4337	2009	110000	83000	Petrol	Individual	Manual	Second Owner	Maruti
4338	2016	865000	90000	Diesel	Individual	Manual	First Owner	Hyundai
4339	2016	225000	40000	Petrol	Individual	Manual	First Owner	Renault

4340 rows × 8 columns

In [107]:
```
car['price_EUR'] = (car['selling_price'] * 0.012).round(0)
car['price_EUR']
```