In [43]:
```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [13]:
```python
df = pd.read_csv('CAR DETAILS FROM CAR DEKHO.csv')
df
```

Out[13]:

| | name | year | selling_price | km_driven | fuel | seller_type | transmission | owner |
|---|---|---|---|---|---|---|---|---|
| 0 | Maruti 800 AC | 2007 | 60000 | 70000 | Petrol | Individual | Manual | First Owner |
| 1 | Maruti Wagon R LXI Minor | 2007 | 135000 | 50000 | Petrol | Individual | Manual | First Owner |
| 2 | Hyundai Verna 1.6 SX | 2012 | 600000 | 100000 | Diesel | Individual | Manual | First Owner |
| 3 | Datsun RediGO T Option | 2017 | 250000 | 46000 | Petrol | Individual | Manual | First Owner |
| 4 | Honda Amaze VX i-DTEC | 2014 | 450000 | 141000 | Diesel | Individual | Manual | Second Owner |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4335 | Hyundai i20 Magna 1.4 CRDi (Diesel) | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner |
| 4336 | Hyundai i20 Magna 1.4 CRDi | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner |
| 4337 | Maruti 800 AC BSIII | 2009 | 110000 | 83000 | Petrol | Individual | Manual | Second Owner |
| 4338 | Hyundai Creta 1.6 CRDi SX Option | 2016 | 865000 | 90000 | Diesel | Individual | Manual | First Owner |
| 4339 | Renault KWID RXT | 2016 | 225000 | 40000 | Petrol | Individual | Manual | First Owner |

4340 rows × 8 columns

```python
def comp(x) :
    return  x[:x.index(" ")]
df["comp"] = df["name"].apply(comp)
```

In [70]:
```python
df.to_csv('CAR DETAILS FROM CAR DEKHO.csv')
```

In [71]:
```python
df = pd.read_csv('CAR DETAILS FROM CAR DEKHO.csv')
df
```

4340 rows × 11 columns

In [75]:
```python
df = df.loc[:, ~df.columns.str.contains('^Unnamed:0.1')]
df = df.loc[:, ~df.columns.str.contains('^Unnamed:0')]
```

In [76]:
```python
df
```

Out[76]:

| | name | year | selling_price | km_driven | fuel | seller_type | transmission | owner | comp |
|---|---|---|---|---|---|---|---|---|---|
| 0 | Maruti 800 AC | 2007 | 60000 | 70000 | Petrol | Individual | Manual | First Owner | Maruti |
| 1 | Maruti Wagon R LXI Minor | 2007 | 135000 | 50000 | Petrol | Individual | Manual | First Owner | Maruti |
| 2 | Hyundai Verna 1.6 SX | 2012 | 600000 | 100000 | Diesel | Individual | Manual | First Owner | Hyundai |
| 3 | Datsun RediGO T Option | 2017 | 250000 | 46000 | Petrol | Individual | Manual | First Owner | Datsun |
| 4 | Honda Amaze VX i-DTEC | 2014 | 450000 | 141000 | Diesel | Individual | Manual | Second Owner | Honda |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4335 | Hyundai i20 Magna 1.4 CRDi (Diesel) | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner | Hyundai |
| 4336 | Hyundai i20 Magna 1.4 CRDi | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner | Hyundai |
| 4337 | Maruti 800 AC BSIII | 2009 | 110000 | 83000 | Petrol | Individual | Manual | Second Owner | Maruti |
| 4338 | Hyundai Creta 1.6 CRDi SX Option | 2016 | 865000 | 90000 | Diesel | Individual | Manual | First Owner | Hyundai |
| 4339 | Renault KWID RXT | 2016 | 225000 | 40000 | Petrol | Individual | Manual | First Owner | Renault |

4340 rows × 9 columns

In [79]:
```python
df.to_csv('CAR DETAILS FROM CAR DEKHO.csv' , index = False)
```

In [83]:
```python
df = pd.read_csv('CAR DETAILS FROM CAR DEKHO.csv')
df
```

Out[83]:

| | name | year | selling_price | km_driven | fuel | seller_type | transmission | owner | comp |
|---|---|---|---|---|---|---|---|---|---|
| 0 | Maruti 800 AC | 2007 | 60000 | 70000 | Petrol | Individual | Manual | First Owner | Maruti |
| 1 | Maruti Wagon R LXI Minor | 2007 | 135000 | 50000 | Petrol | Individual | Manual | First Owner | Maruti |

| | name | year | selling_price | km_driven | fuel | seller_type | transmission | owner | comp |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Hyundai Verna 1.6 SX | 2012 | 600000 | 100000 | Diesel | Individual | Manual | First Owner | Hyundai |
| 3 | Datsun RediGO T Option | 2017 | 250000 | 46000 | Petrol | Individual | Manual | First Owner | Datsun |
| 4 | Honda Amaze VX i-DTEC | 2014 | 450000 | 141000 | Diesel | Individual | Manual | Second Owner | Honda |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4335 | Hyundai i20 Magna 1.4 CRDi (Diesel) | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner | Hyundai |
| 4336 | Hyundai i20 Magna 1.4 CRDi | 2014 | 409999 | 80000 | Diesel | Individual | Manual | Second Owner | Hyundai |
| 4337 | Maruti 800 AC BSIII | 2009 | 110000 | 83000 | Petrol | Individual | Manual | Second Owner | Maruti |
| 4338 | Hyundai Creta 1.6 CRDi SX Option | 2016 | 865000 | 90000 | Diesel | Individual | Manual | First Owner | Hyundai |
| 4339 | Renault KWID RXT | 2016 | 225000 | 40000 | Petrol | Individual | Manual | First Owner | Renault |

4340 rows × 9 columns

In [73]:
df.isnull().sum()

Out[73]:
Unnamed: 0.1    0

Unnamed: 0      0

name            0

year            0

selling_price   0

km_driven       0

fuel            0

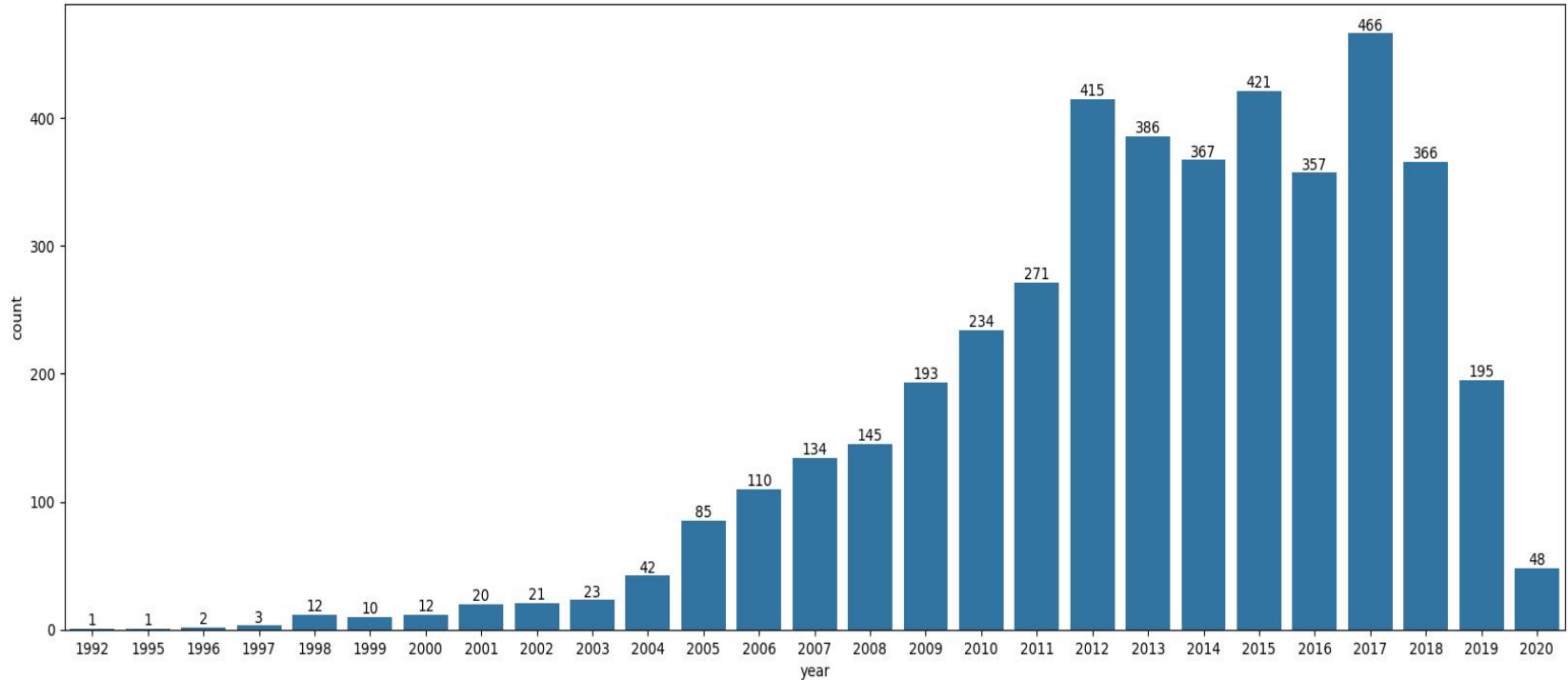seller_type     0

transmission    0

owner           0

comp            0

dtype: int64

In [84]:
c = ['r','y','g','b']plt.figure(figsize=(20,7))AS = sns.countplot(x = "year" ,  data = df )for bars in AS.containers:
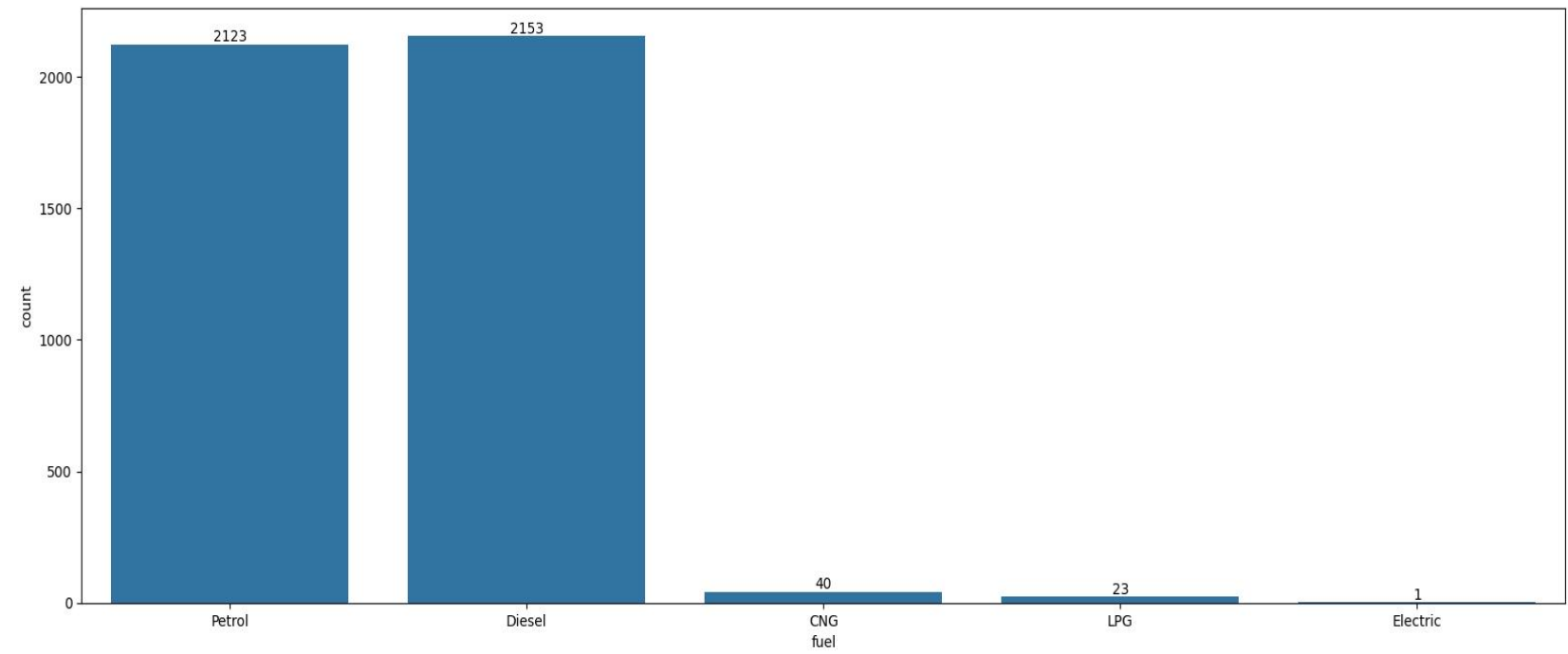    AS.bar_label(bars)plt.show()



by this graph we can conclude the maximum sales of cars is from year 2017 & min of 1992 & 1995

In [85]:
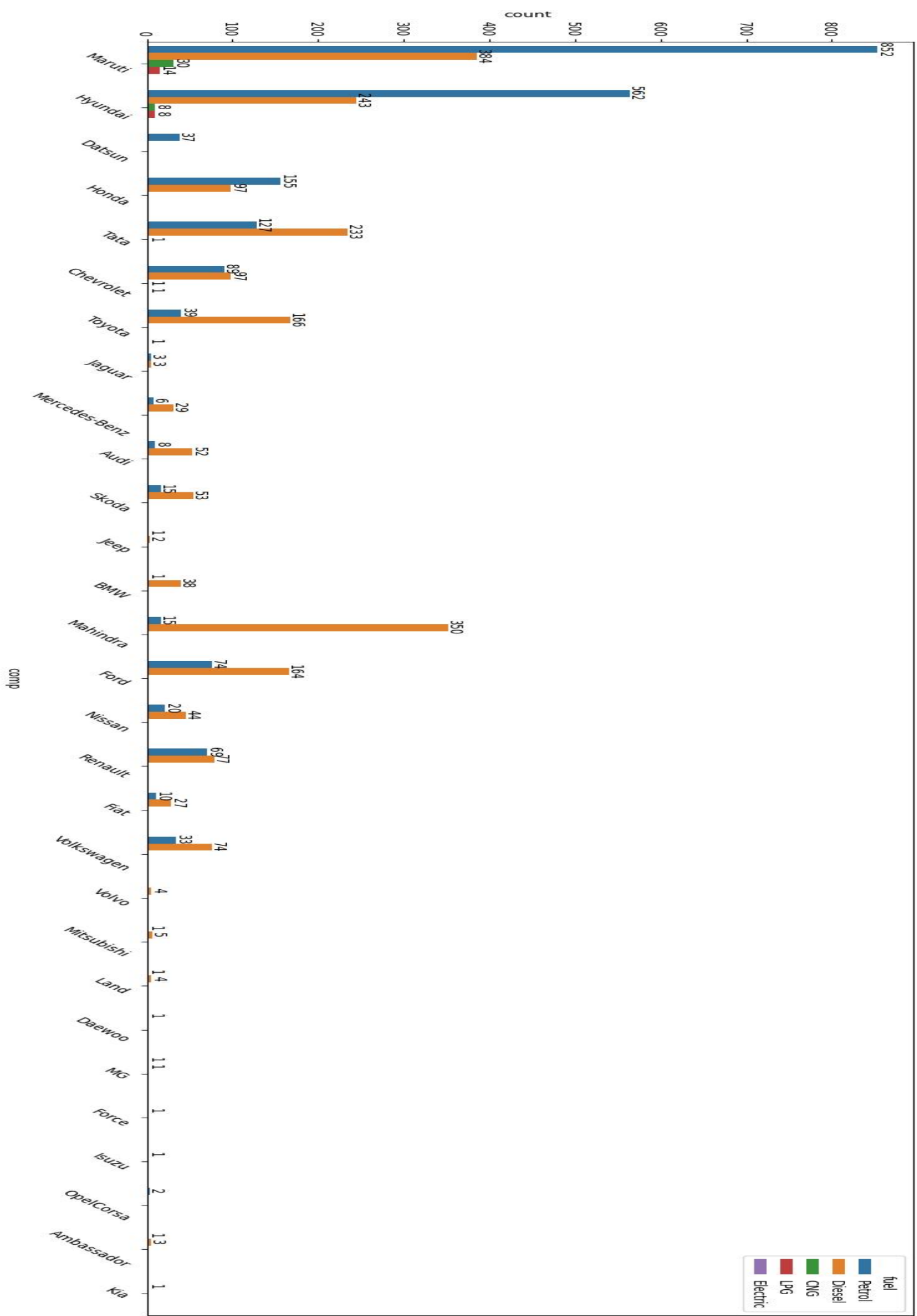c = ['r','y','g','b']plt.figure(figsize=(20,7))AS = sns.countplot(x = "fuel" ,  data = df )for bars in AS.containers:
    AS.bar_label(bars)plt.show()

BY this data we get to know that the dieselA is selling the most with petrol where as electric are selling least in no

In [4]:

```python
import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as snsdf = pd.read_csv('CAR DETAILS FROM CAR DEKHO.csv')
```

In [41]:

```python
import numpy as npimport pandas as pdimport matplotlib.pyplot as pltimport seaborn as sns

plt.figure(figsize=(30,8))AS = sns.countplot(x = "comp" , data = df , hue = "fuel"  )for bars in AS.containers:

    AS.bar_label(bars)plt.xticks(rotation=45)  # Rotate x-axis labels for better visibility

plt.show()
```
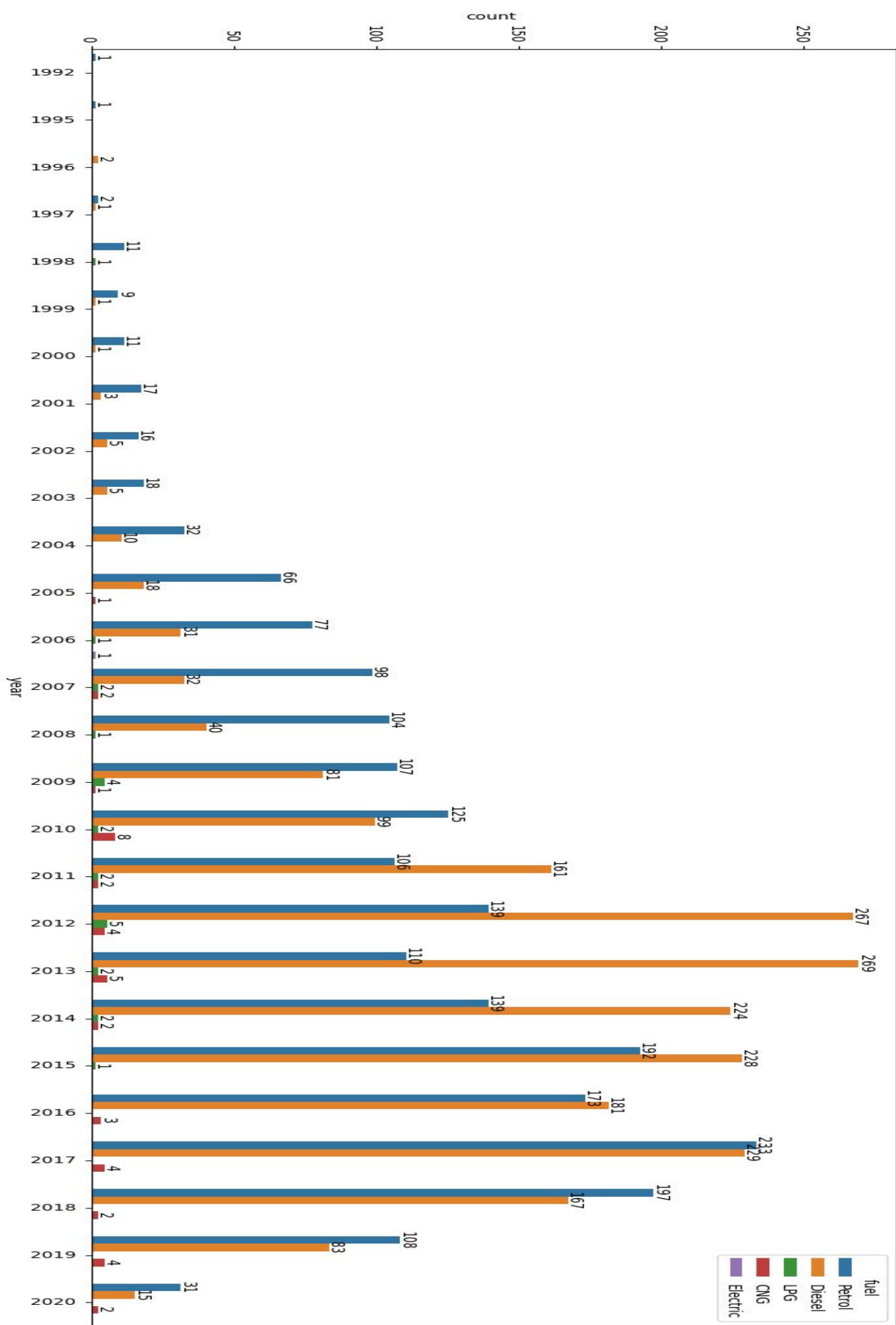
here most sold fuel is diesel = 350 & company which sold most cars is maruti 852

In [42]:

```
plt.figure(figsize=(25,8))AS = sns.countplot( x = "year", data = df , hue= "fuel"   )for bars in AS.containers:
    AS.bar_label(bars)plt.xticks(rotation=90 ) # Rotate x-axis labels for better visibility
plt.show()
```

by this data we can conclude that overall diesel was most sold fuel and its most consumption was in 2013

In [56]:

```
fig, axes = plt.subplots(1, 2, figsize=(15, 6)) As = sns.countplot(ax=axes[0], x="transmission", data=df)for bars in As.containers:
    As.bar_label(bars)axes[0].set_title("Transmission")  # Add title to the first subplot

# Second subplot for "owner"ss = sns.countplot(ax=axes[1], x="owner", data=df)for bars in ss.containers:
    ss.bar_label(bars)axes[1].set_title("Owner")  # Add title to the second subplot

# Adjust layout and show the plotplt.tight_layout()plt.show()
```
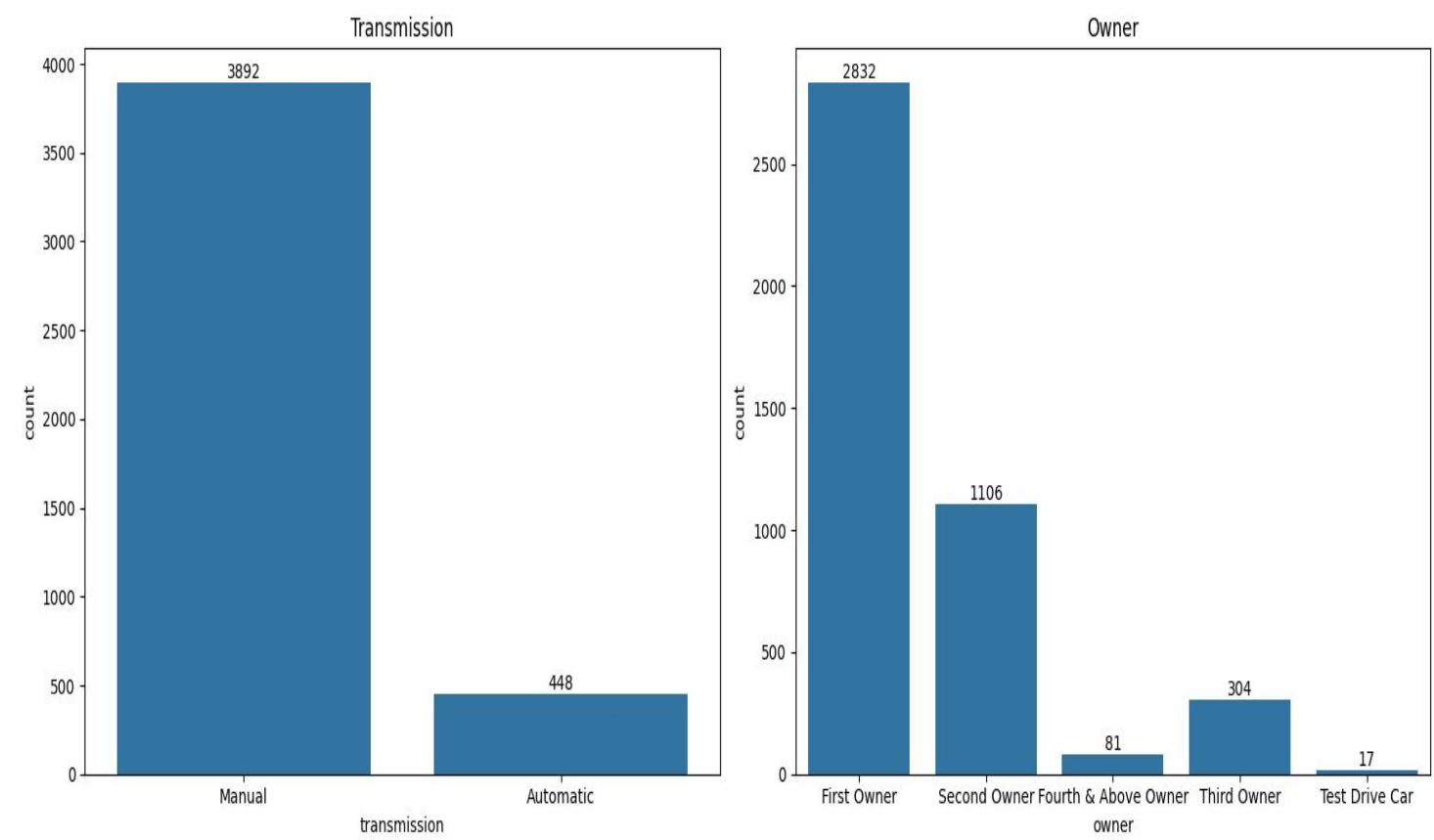
Here , most sold cars transmission type is manual total 3892 units were sold and 448 automatic cars are sold where these sold cars. Where as most cars owner where first owner .