In [1]:
```
# Loding libraries

# Basic libraries
import numpy as np
import pandas as pd
import pandas_profiling as pp

# Visuvalization libraries
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
import plotly as py
import plotly.graph_objs as go
import pandas_profiling

# importing figure factory
import plotly.figure_factory as ff

# Offline mode for plotly
from plotly.offline import iplot, init_notebook_mode
init_notebook_mode()

```

In [2]:
```
# Loding data

# As we have metadata (mased attribute and relevant attribute name)
#     1. Removed the column header MANUALY from both train and test data files
#     2. Using the attribute name as colum names

train = pd.read_csv('train.csv', encoding = "ISO-8859-1", names=['VehicleID','

```

In [3]:
```
train.head()
```

Out[3]:

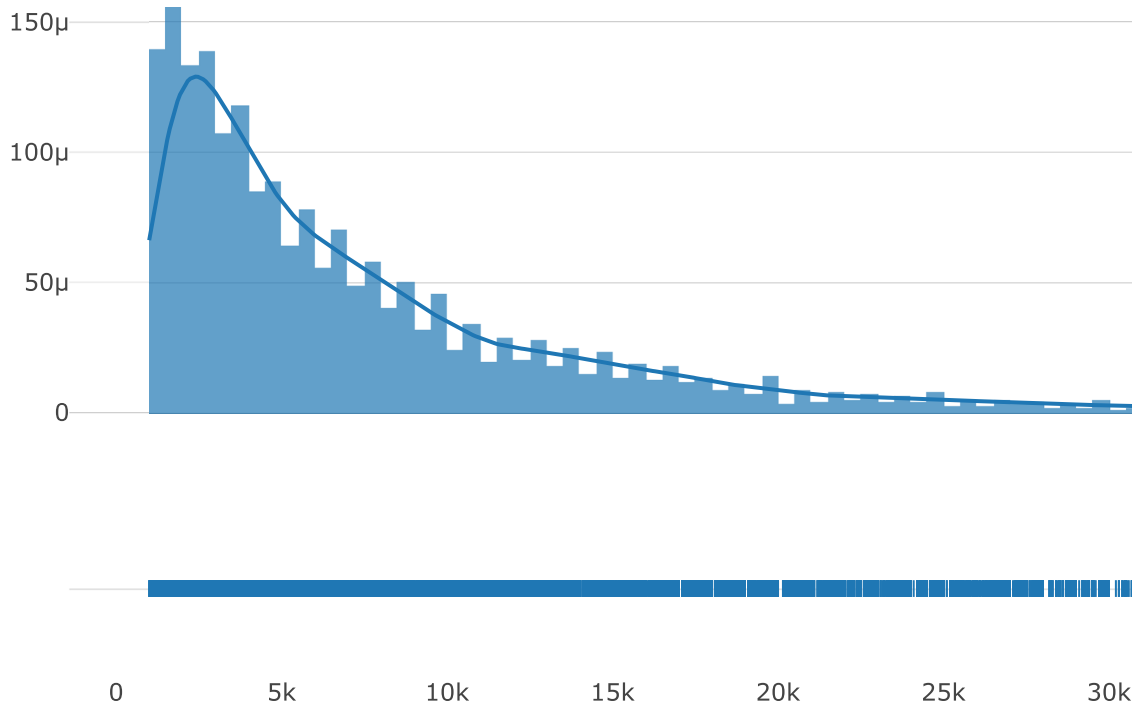
	NameOfTheVehicle	SellerType	OfferType	Price	VehicleType	YearOfVehicleF
	Subaru_G3X_Justy_1.3	private	offer	3850	Small Car	
agen_Passat_Variant_2.0_TDI_DPF_Comfortline		private	offer	5999	Combi	
_Benz_C_220_CDI_Automatik_Elegance_AHK...		private	offer	5990	limousine	
	Alfa_Romeo_147_1.9_JTD_16V_M_Jet	private	offer	4000	limousine	
	Audi_A4	private	offer	12950	Combi	

Univariate analysis

Car price distribution

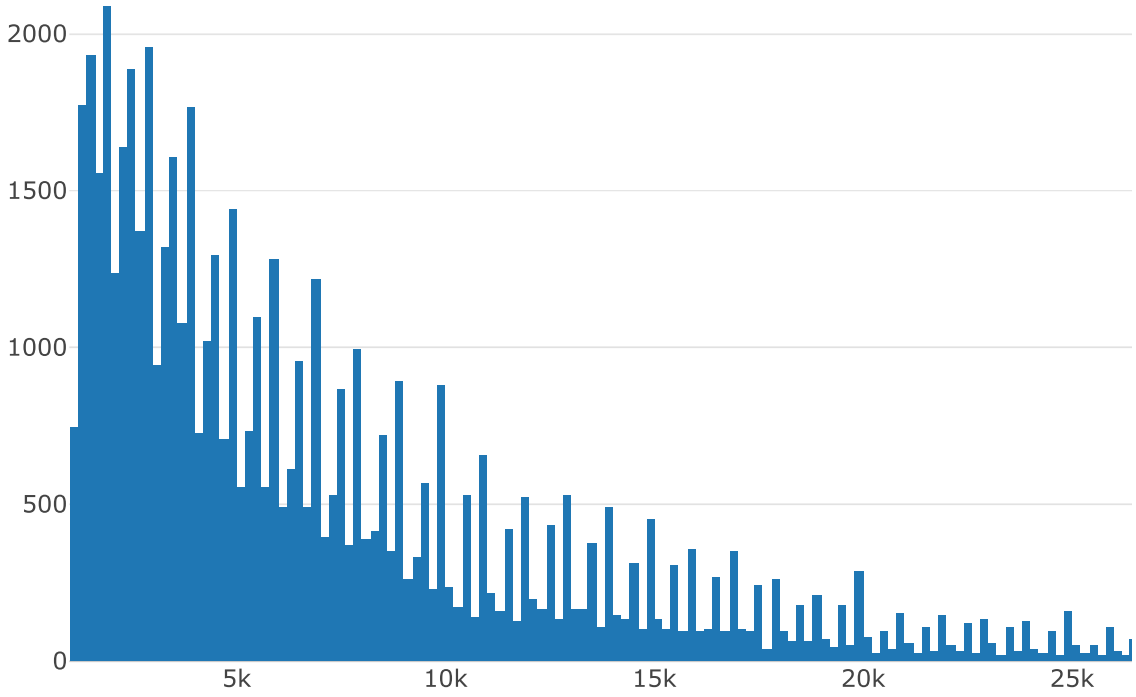
In [5]:
```
fig = ff.create_distplot(hist_data=[train.Price.tolist()],
                         group_labels=['Price distribution'],
                         bin_size=500)

iplot(fig)
```



Car price historgram

In [6]:
```
1 trace = go.Histogram(x=train.Price)
2 data = [trace]
3 iplot({"data":data})
```



In [ ]:
```
1
```

In [ ]:
```
1
```

Multivariate

Gear box and model wise details

In [7]:
```
1 automatic = train[train.GearBoxType == 'automatic']
2 manual = train[train.GearBoxType == 'manual']
```

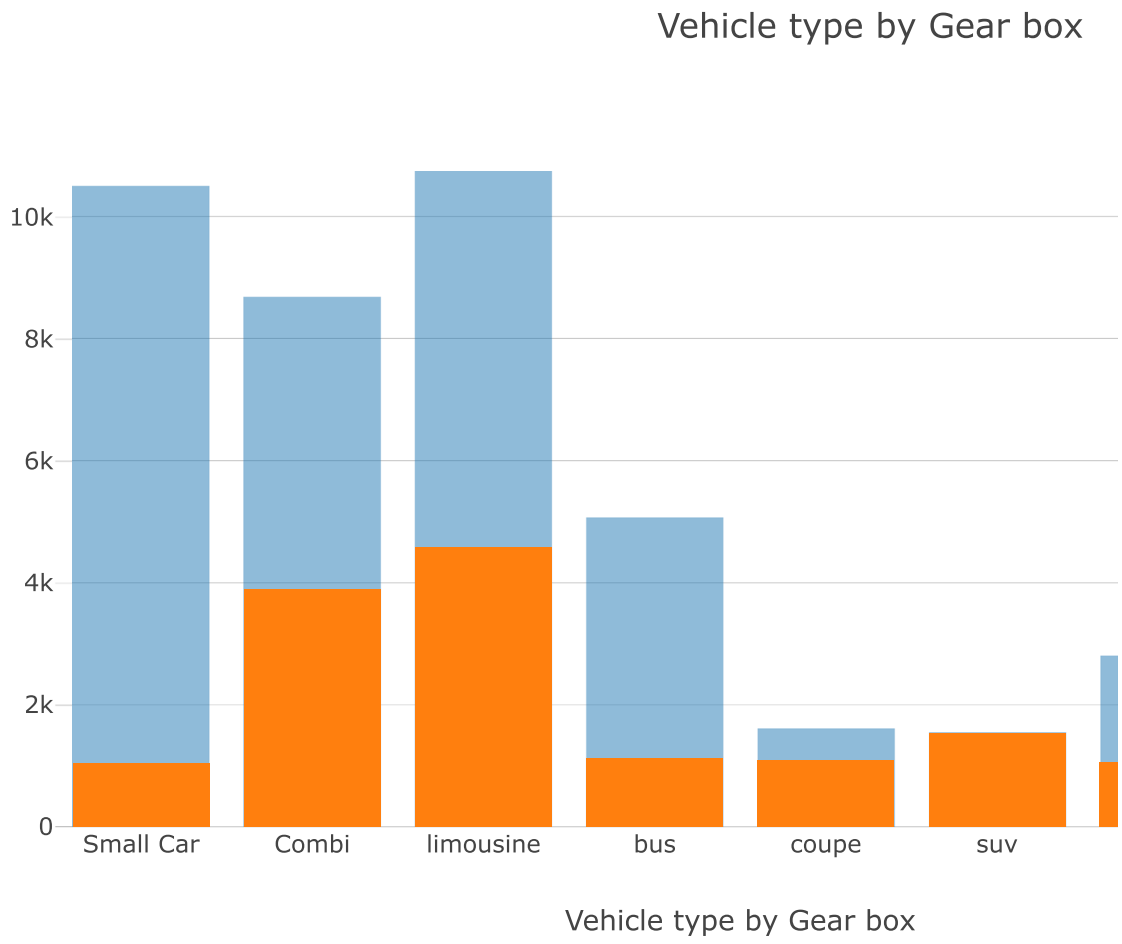
In [12]:

```
trace1 = go.Histogram(x=automatic.VehicleType, name='Automatic vehicle type')
trace0 = go.Histogram(x=manual.VehicleType, name='Manual vehicle type', opacit

data = [trace0, trace1]

layout = {'title':'Vehicle type by Gear box',
          'xaxis':{'title':'Vehicle type by Gear box'},
         'barmode': 'overlay'}

iplot({"data":data, 'layout':layout})
```



In [ ]:

```
1
```