

## Task 1

Create a bar chart or histogram to visualize the distribution of a categorical or continuous variable, such as the distribution of ages or genders in a population.

	Model	Year	Region	Color	Fuel_Type	Transmission	Engine_Size_L	Mileage_KM	Price_USD	Sales_Volume	Sales_Classification
0	5 Series	2016	Asia	Red	Petrol	Manual	3.5	151748.0	98740.0	8300.0	High
1	i8	2013	North America	Red	Hybrid	Automatic	1.6	121671.0	79219.0	3428.0	Low
2	5 Series	2022	North America	Blue	Petrol	Automatic	4.5	10991.0	113265.0	6994.0	Low
3	X3	2024	Middle East	Blue	Petrol	Automatic	1.7	27255.0	60971.0	4047.0	Low
4	7 Series	2020	South America	Black	Diesel	Manual	2.1	122131.0	49898.0	3080.0	Low
...	...	...	...	...	...	...	...	...	...	...	...
69002	i3	2014	Asia	Red	Hybrid	Manual	4.6	151030.0	42932.0	8182.0	High
69003	i3	2023	Middle East	Silver	Electric	Manual	4.2	147396.0	48714.0	9816.0	High
69004	5 Series	2010	Middle East	Red	Petrol	Automatic	4.5	174939.0	46126.0	8280.0	High
69005	i3	2020	Asia	White	Electric	Automatic	3.8	3379.0	58566.0	9486.0	High
69006	X1	2020	North America	Blue	Diesel	Manual	3.3	171003.0	77492.0	1764.0	Low

```
data.columns
```

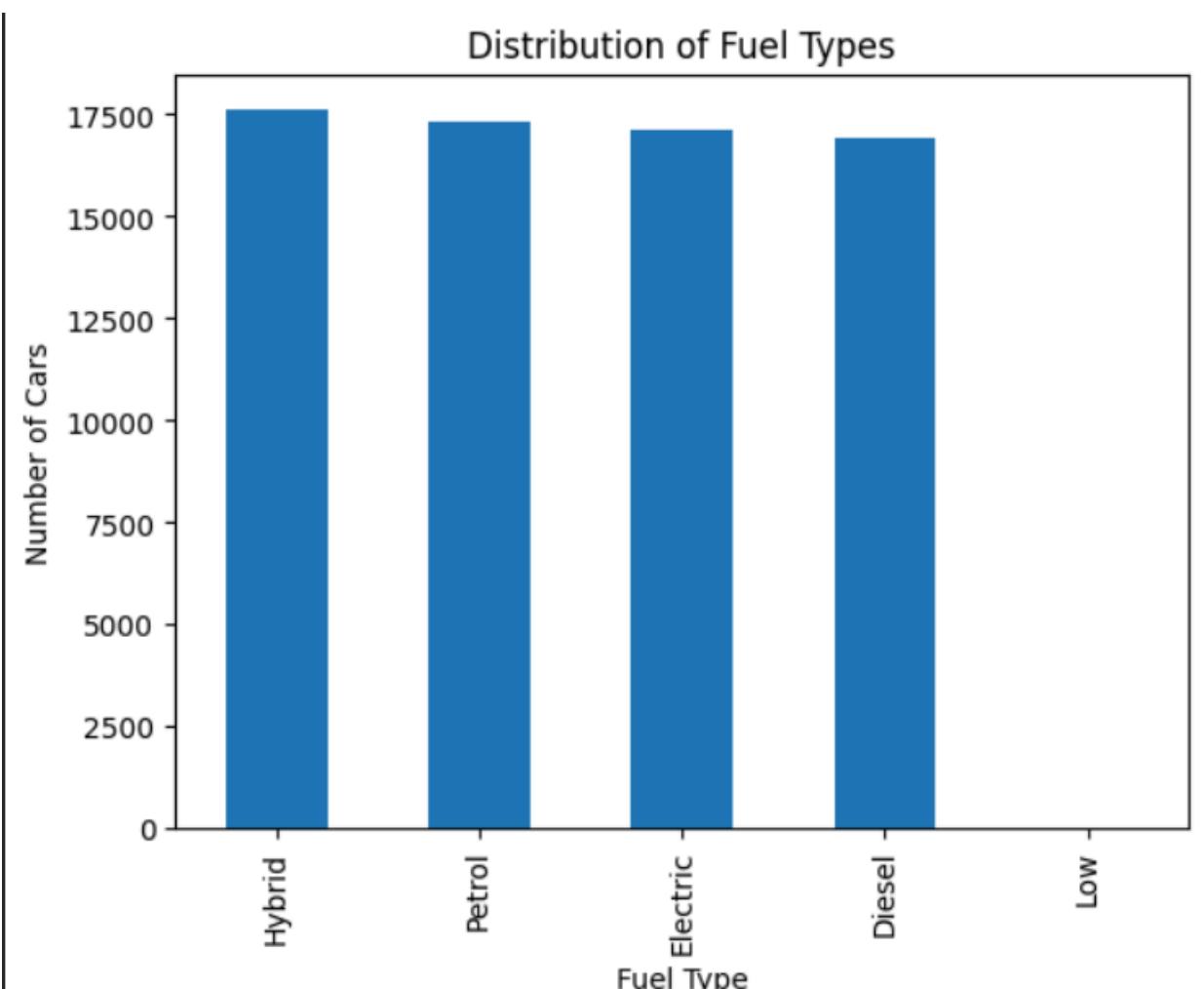
```
Index(['Model', 'Year', 'Region', 'Color', 'Fuel_Type', 'Transmission',
       'Engine_Size_L', 'Mileage_KM', 'Price_USD', 'Sales_Volume',
       'Sales_Classification'],
      dtype='object')
```

### Bar Chart (Categorical Variable) Distribution of Fuel\_Type

```
▶ import pandas as pd
import matplotlib.pyplot as plt

# Count values of Fuel_Type
fuel_counts = data['Fuel_Type'].value_counts()

# Bar chart
plt.figure()
fuel_counts.plot(kind='bar')
plt.xlabel("Fuel Type")
plt.ylabel("Number of Cars")
plt.title("Distribution of Fuel Types")
plt.show()
```



### Histogram (Continuous Variable) Distribution of Price\_USD

```
import pandas as pd
import matplotlib.pyplot as plt

# Histogram for Price_USD
plt.figure()
plt.hist(data['Price_USD'], bins=10)
plt.xlabel("Price (USD)")
plt.ylabel("Number of Cars")
plt.title("Distribution of Car Prices")
plt.show()
```

### Distribution of Car Prices

