This dataset provides a list of UAE Used Cars, featuring models from 2020 to 2024 and brands that sold more than 100 units in 2024 with precise location data (covering cities like Dubai, Abu Dhabi, and Sharjah). It is designed for data scientists, analysts, and automotive enthusiasts to explore regional market trends, predict car prices, and visualize geospatial insights.

In [14]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [16]:
```
df = pd.read_csv("uae_used_cars_10k.csv")
```

In [18]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1384 entries, 0 to 1383
Data columns (total 12 columns):
 #   Column        Non-Null Count  Dtype 
---  ------        --------------  ----- 
 0   Make          1384 non-null   object
 1   Model         1384 non-null   object
 2   Year          1384 non-null   int64 
 3   Price         1384 non-null   int64 
 4   Mileage       1384 non-null   int64 
 5   Body Type     1384 non-null   object
 6   Cylinders     1381 non-null   object
 7   Transmission  1384 non-null   object
 8   Fuel Type     1384 non-null   object
 9   Color         1384 non-null   object
 10  Location      1384 non-null   object
 11  Description   1384 non-null   object
dtypes: int64(3), object(9)
memory usage: 129.9+ KB
```

In [20]:
```
df.head(5)
```

Out[20]:

	Make	Model	Year	Price	Mileage	Body Type	Cylinders	Transmission	Fuel Type	Colo
0	toyota	land-cruiser-76-series	2020	139994	71399	Pick Up Truck	4	Manual Transmission	Gasoline	Whit
1	nissan	x-trail	2020	85012	28571	SUV	4	Automatic Transmission	Gasoline	Whit
2	bmw	x6	2021	342897	292448	SUV	8	Automatic Transmission	Gasoline	Blac
3	porsche	cayenne	2024	380035	193415	SUV	6	Automatic Transmission	Gasoline	Whit
4	land-rover	range-rover	2024	222044	33480	SUV	8	Automatic Transmission	Gasoline	Blac

In [22]:
```
print(df.columns)
```

```
Index(['Make', 'Model', 'Year', 'Price', 'Mileage', 'Body Type', 'Cylinders',
       'Transmission', 'Fuel Type', 'Color', 'Location', 'Description'],
      dtype='object')
```

In [24]:
```
print (df.dtypes)
```

```
Make           object
Model          object
Year            int64
Price           int64
Mileage         int64
Body Type      object
Cylinders      object
Transmission   object
Fuel Type      object
Color          object
Location       object
Description    object
dtype: object
```

In [26]:
```
df['Make']
```

Out[26]:
```
0           toyota
1           nissan
2              bmw
3          porsche
4       land-rover
           ...
1379          benz
1380          benz
1381        toyota
1382        toyota
1383          benz
Name: Make, Length: 1384, dtype: object
```

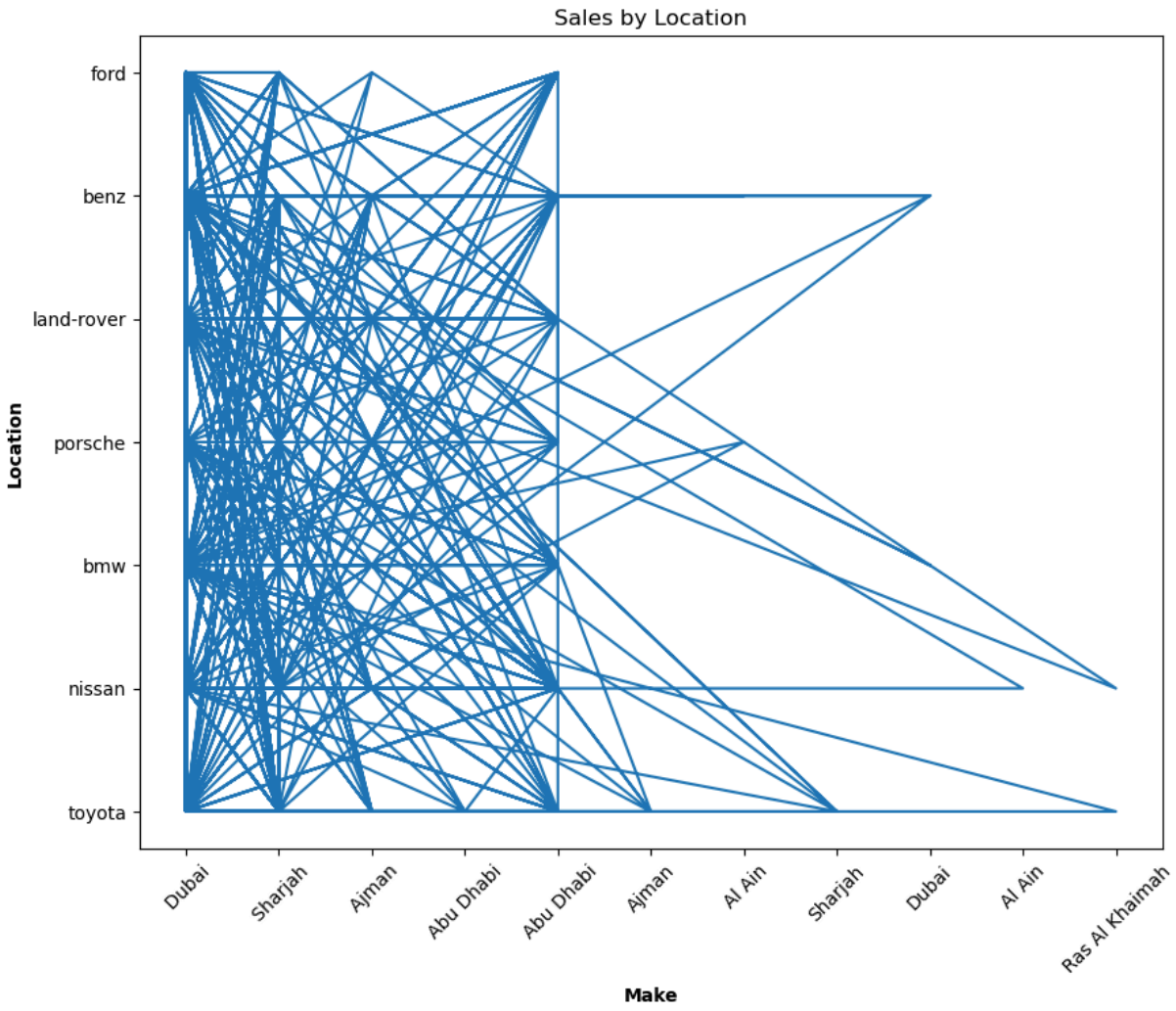
In [28]:
```
df["Make"].value_counts()
```

Out[28]:
```
Make
benz          408
nissan        228
toyota        211
bmw           176
land-rover    128
ford          125
porsche       108
Name: count, dtype: int64
```

LINE PLOT

In [34]:
```
plt.figure(figsize=(10, 8))
plt.plot(df["Location"], df["Make"])
plt.title ("Sales by Location")
plt.xlabel("Make", fontweight= "bold")
plt.ylabel("Location", fontweight= "bold")
plt.xticks(rotation=45)
#plt.yticks(range(10000, max(df["Price"]) + 10000, 100000))
```

Out[34]:
```
([0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10],
 [Text(0, 0, ' Dubai'),
  Text(1, 0, ' Sharjah'),
  Text(2, 0, ' Ajman'),
  Text(3, 0, 'Abu Dhabi'),
  Text(4, 0, ' Abu Dhabi'),
  Text(5, 0, 'Ajman'),
  Text(6, 0, ' Al Ain'),
  Text(7, 0, 'Sharjah'),
  Text(8, 0, 'Dubai'),
  Text(9, 0, 'Al Ain'),
  Text(10, 0, ' Ras Al Khaimah')])
```


Sales by Location
ford
benz
land-rover
porsche
bmw
nissan
toyota
Location
Dubai
Sharjah
Ajman
Abu Dhabi
Abu Dhabi
Ajman
Al Ain
Sharjah
Dubai
Al Ain
Ras Al Khaimah
Make

SCATTER PLOT

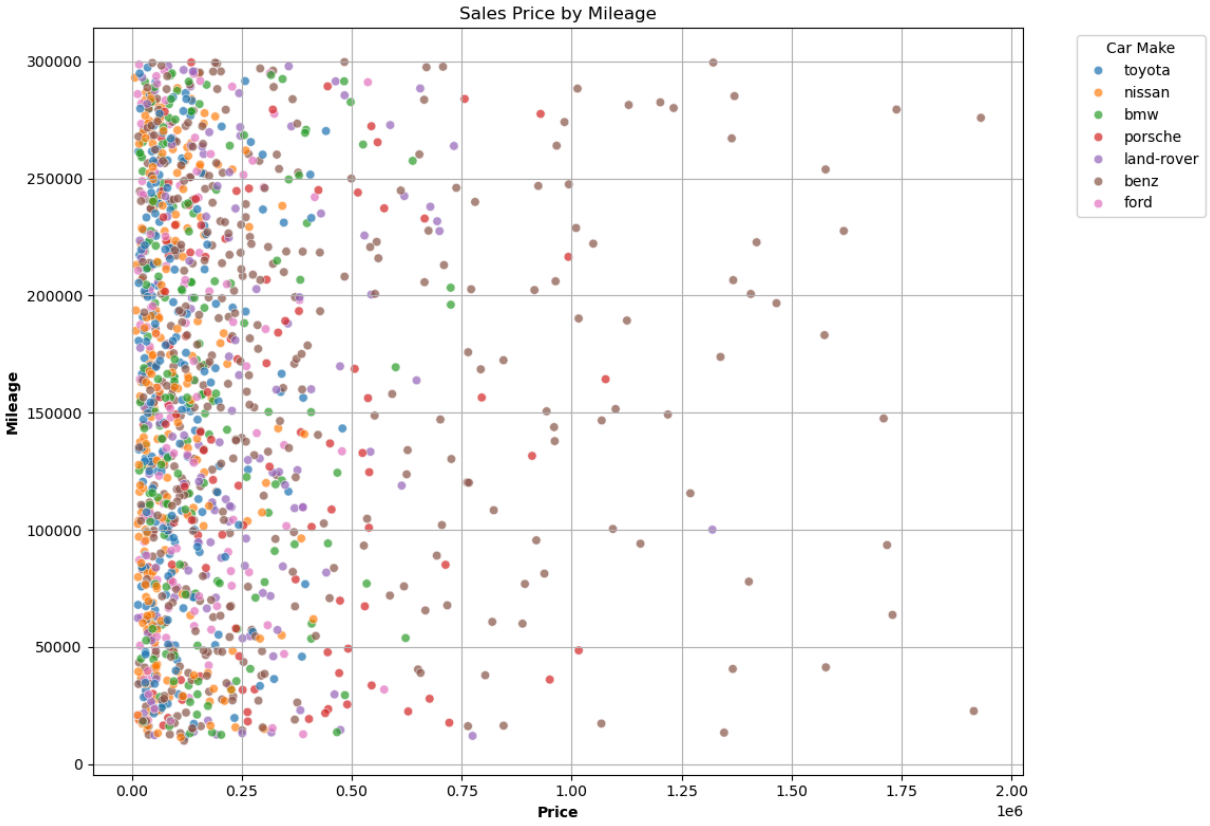
In [36]:
```
plt.figure(figsize=(10, 8))
plt.grid(True)

# Use seaborn scatterplot with hue to color by Make
sns.scatterplot(data=df, x="Price", y="Mileage", hue="Make", palette="tab10", alpha

# Titles and labels
plt.title("Sales Price by Mileage")
plt.xlabel("Price", fontweight= "bold")
plt.ylabel("Mileage", fontweight= "bold")
plt.tight_layout()

# Show legend
plt.legend(title="Car Make", bbox_to_anchor=(1.05, 1), loc='upper left')
```

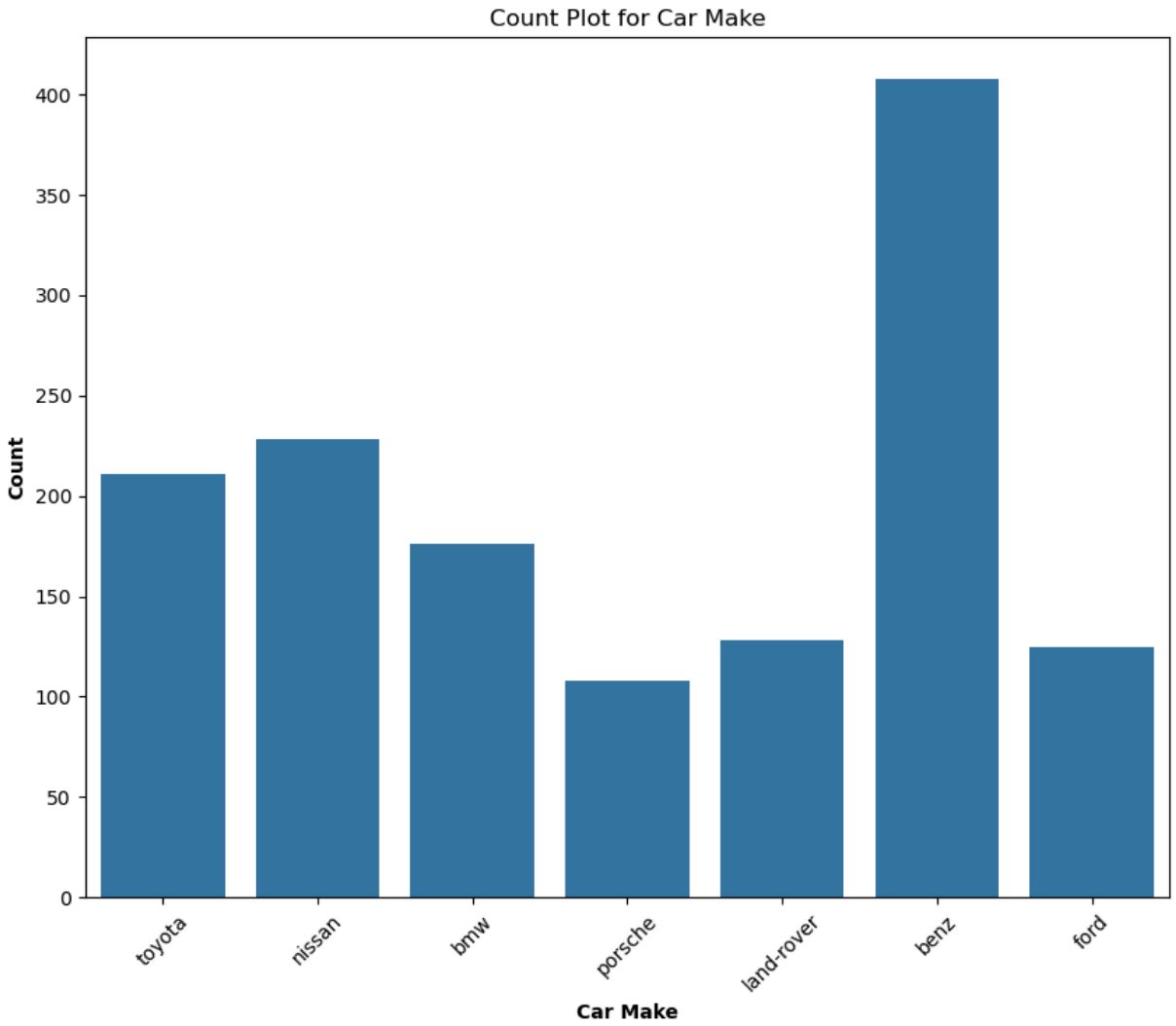
Out[36]: <matplotlib.legend.Legend at 0x2097406b530>



COUNT PLOT

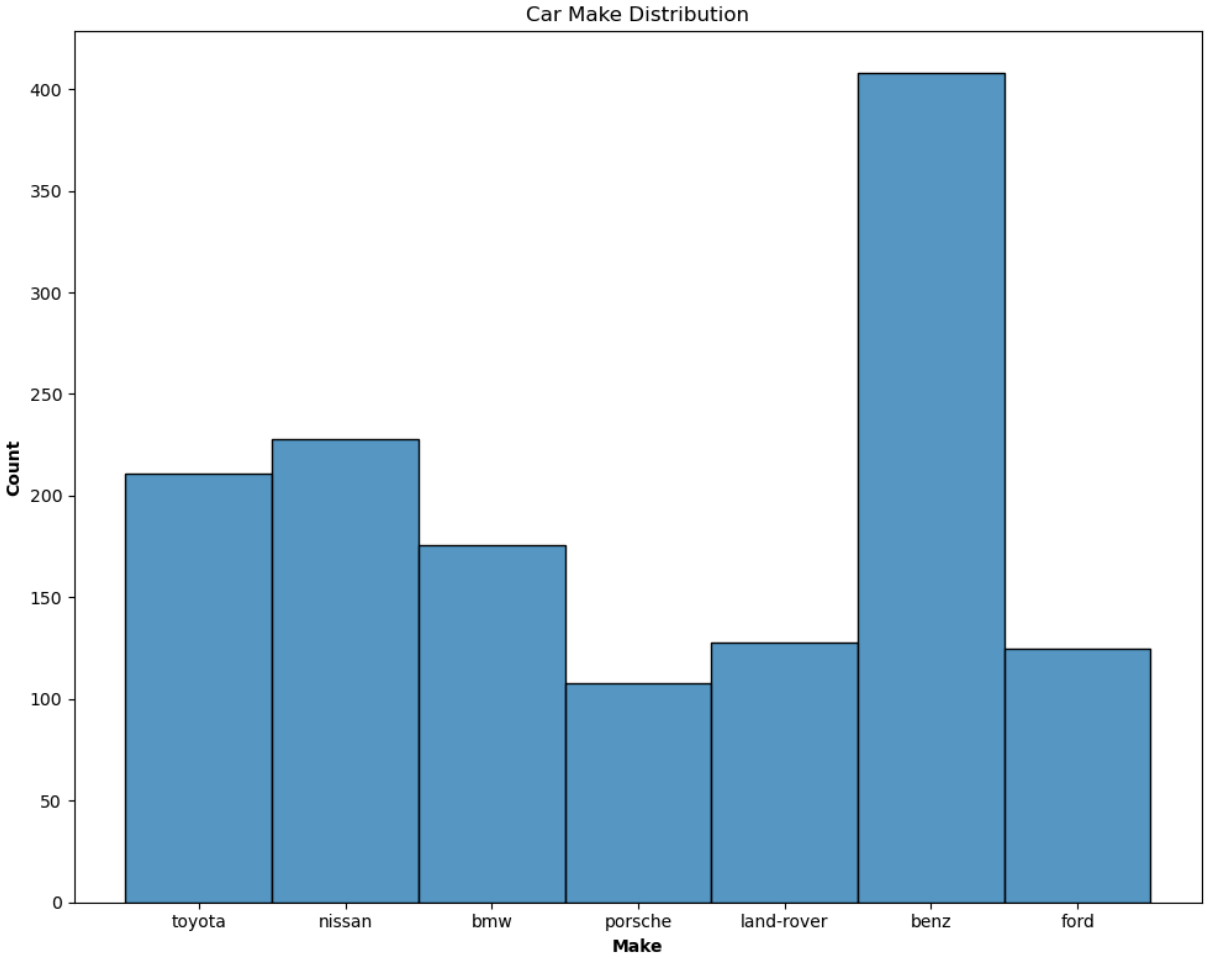
In [38]:
```
plt.figure(figsize=(10, 8))
sns.countplot(data=df, x="Make")
plt.title("Count Plot for Car Make")
plt.xlabel("Car Make", fontweight= "bold")
plt.ylabel("Count", fontweight= "bold")
plt.xticks(rotation=45)
```

Out[38]:
```
([0, 1, 2, 3, 4, 5, 6],
 [Text(0, 0, 'toyota'),
  Text(1, 0, 'nissan'),
  Text(2, 0, 'bmw'),
  Text(3, 0, 'porsche'),
  Text(4, 0, 'land-rover'),
  Text(5, 0, 'benz'),
  Text(6, 0, 'ford')])
```



HISTOGRAM

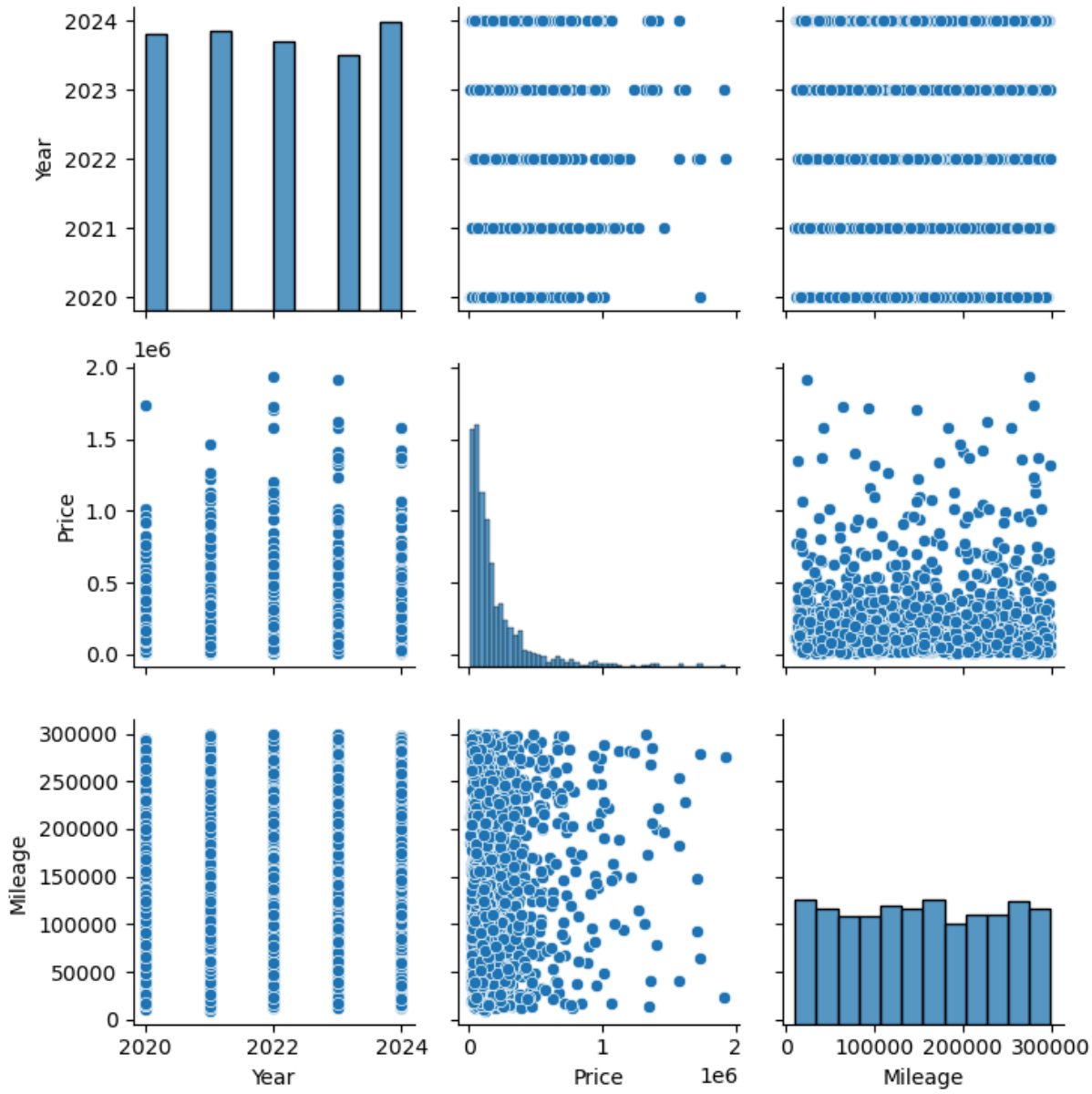
In [32]:
```
plt.figure(figsize=(10, 8))
sns.histplot(data=df, x="Make")
plt.title ("Car Make Distribution")
plt.xlabel("Make", fontweight= "bold")
plt.ylabel("Count", fontweight= "bold")
plt.tight_layout()
#plt.yticks(range(100, 451, 25))
```



PAIR PLOT

In [351…

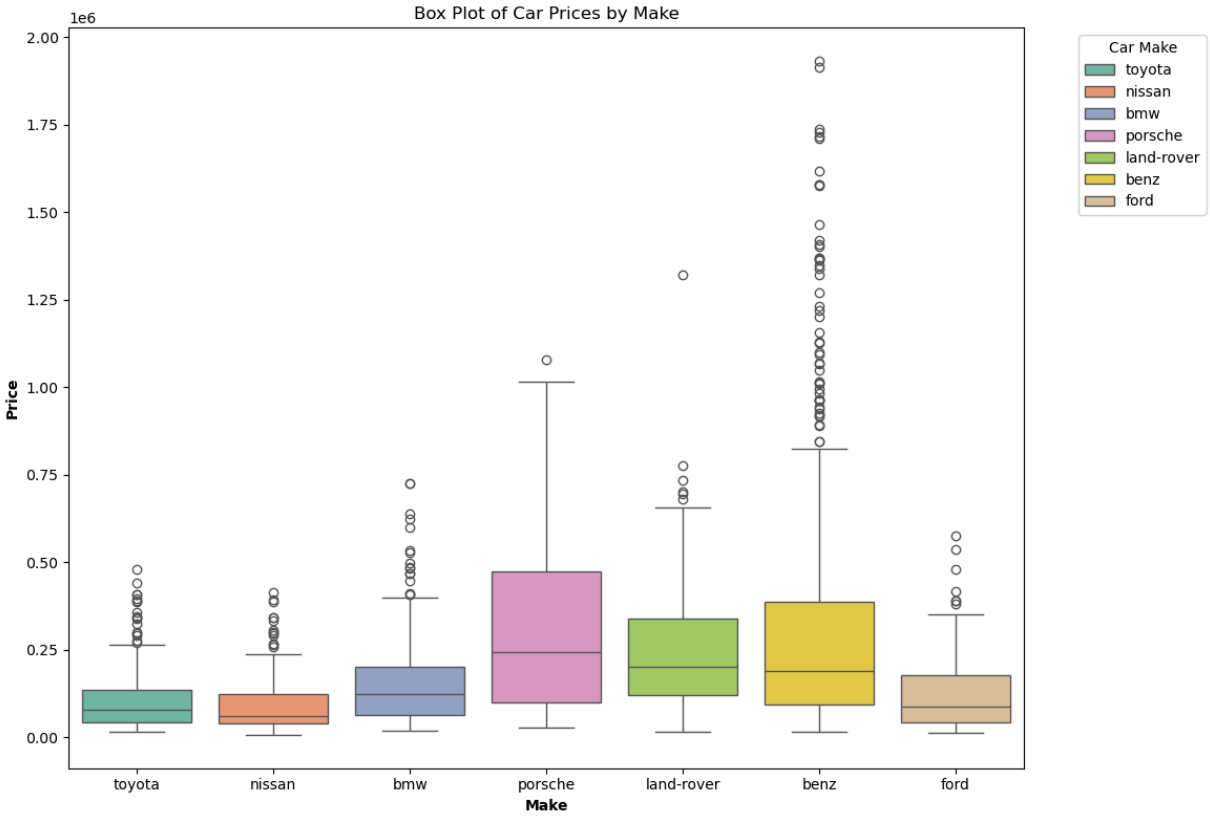
```
sns.pairplot(df)
plt.tight_layout()
```



BOX PLOT

In [40]:
```
plt.figure(figsize=(10, 8))
# Boxplot with automatic color mapping
sns.boxplot(x="Make", y="Price", data=df, hue="Make", palette="Set2", legend=True)
plt.title("Box Plot of Car Prices by Make")
plt.xlabel ("Make", fontweight= "bold")
plt.ylabel ("Price", fontweight= "bold")
plt.tight_layout()
plt.legend(title="Car Make", bbox_to_anchor=(1.05, 1), loc='upper left')
```

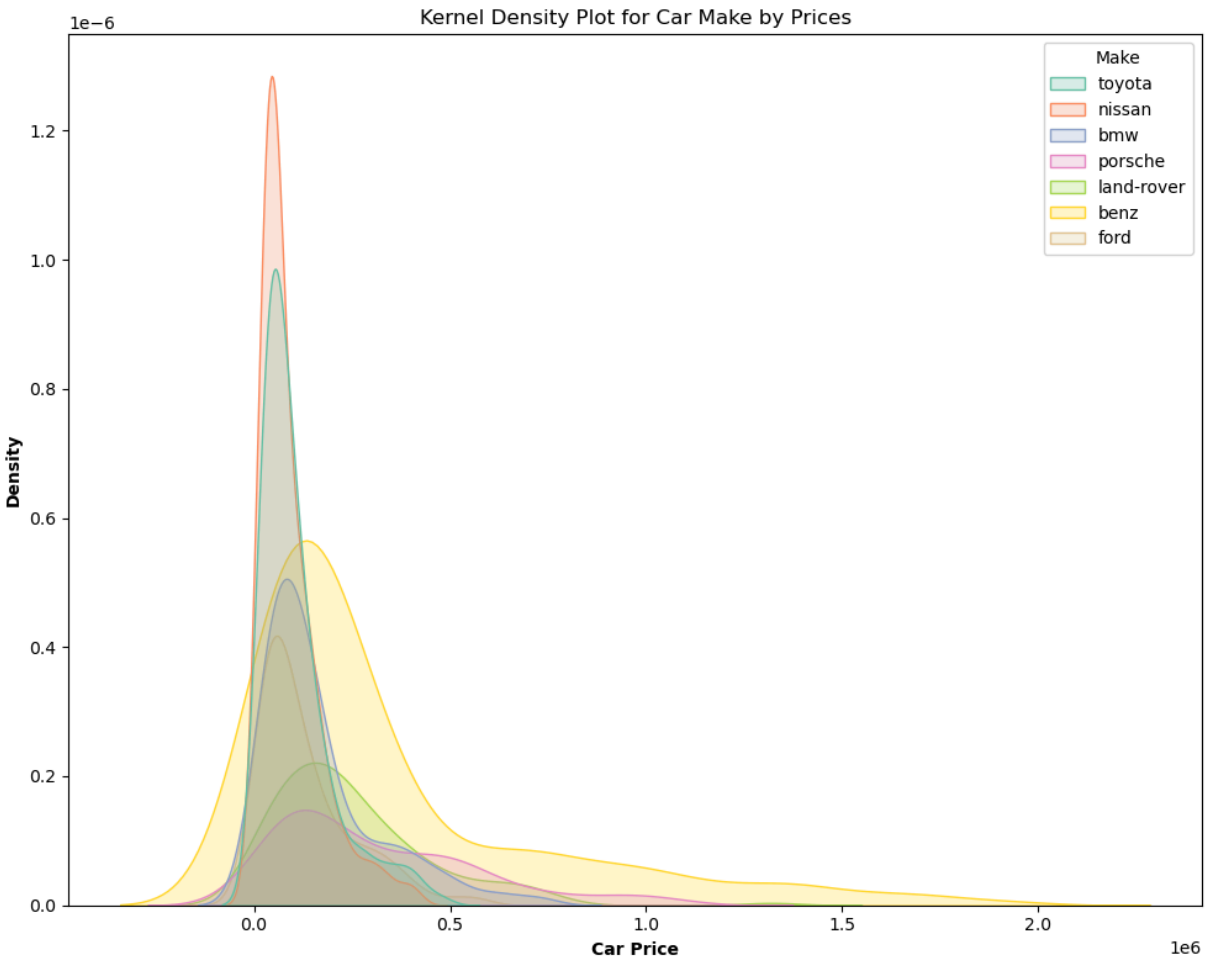
Out[40]: <matplotlib.legend.Legend at 0x20973fd5e50>



KERNEL DENSITY PLOT

In [42]:
```
plt.figure(figsize=(10, 8))
sns.kdeplot(data=df, x="Price", hue="Make", fill=True, palette="Set2", legend=True)
#Add Title and Labels

plt.title("Kernel Density Plot for Car Make by Prices")
plt.xlabel("Car Price", fontweight= "bold")
plt.ylabel("Density", fontweight= "bold")
plt.tight_layout()
```



In [ ]:
```
```