File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

Run Code

Hackathon

Data Analysis on Electric Vehicle

Installing Plotly module

In [1]:
```
!pip install plotly

```

```
Requirement already satisfied: plotly in c:\users\ajayv\anaconda3\lib\site-packages (5.9.0)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\ajayv\anaconda3\lib\site-packages (from plotly) (8.2.2)
```

Reading the CSV data into a DataFrame:

In [1]:
```
import pandas as pd
df = pd.read_csv('EV_Data.csv')
```

Import required library - Plotly Express:

In [2]:
```
import plotly.express as px
```

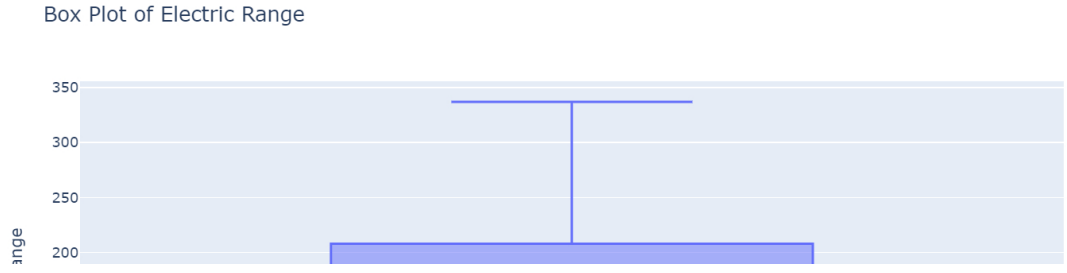
Univariate Analysis - Scatter Plot

In [3]:
```
scatter_fig = px.scatter(df, x='Postal Code', y='2020 Census Tract', title='Scatter Plot of Electric Range vs. Base MSRP')
scatter_fig.show()
```

Univariate Analysis - Box Plot

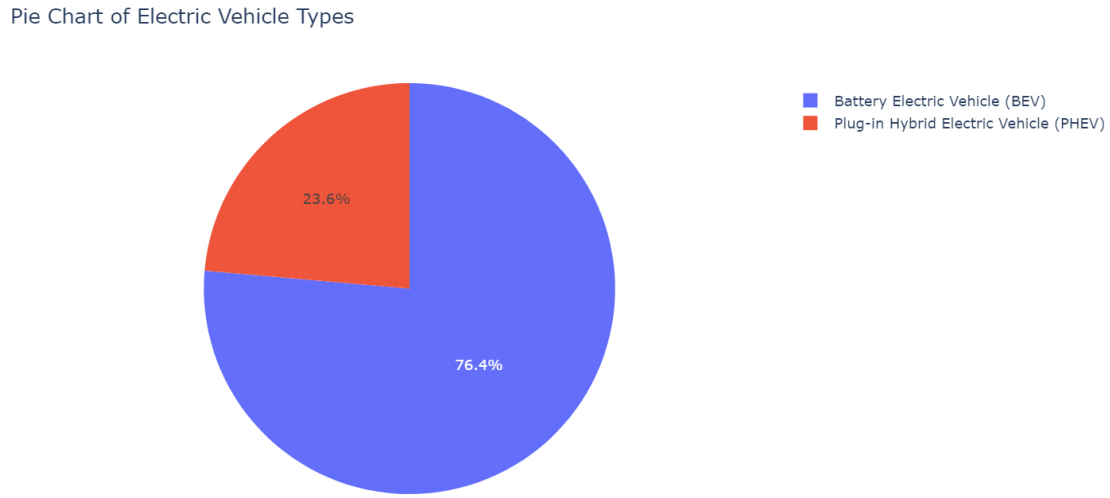
In [4]:
```
fig = px.box(df, y='Electric Range', title='Box Plot of Electric Range')
fig.show()

```



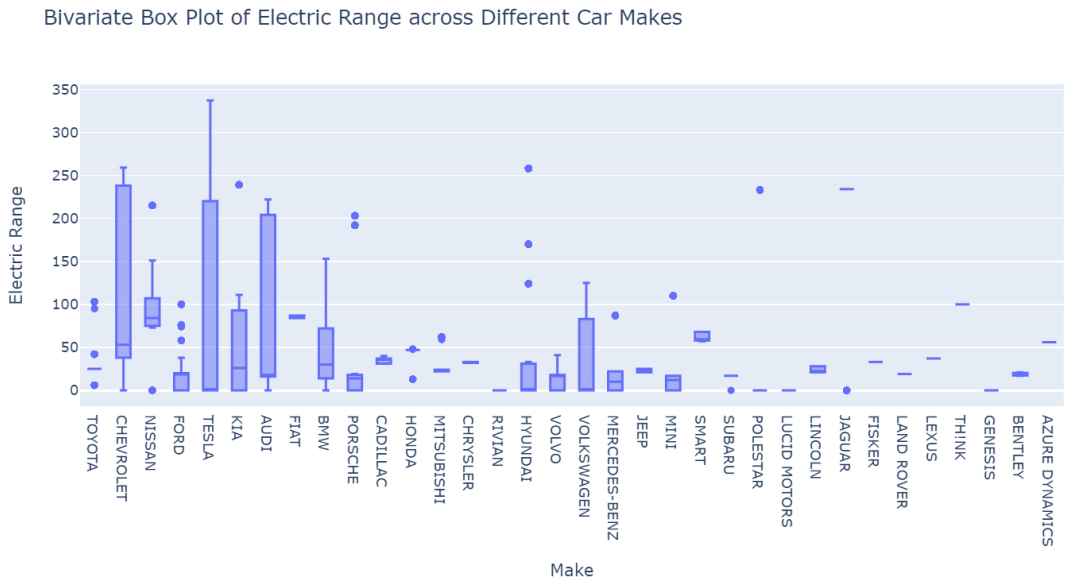
Univariate Analysis - Pie Chart

In [5]:
```
fig = px.pie(df, names='Electric Vehicle Type', title='Pie Chart of Electric Vehicle Types')
fig.show()
```

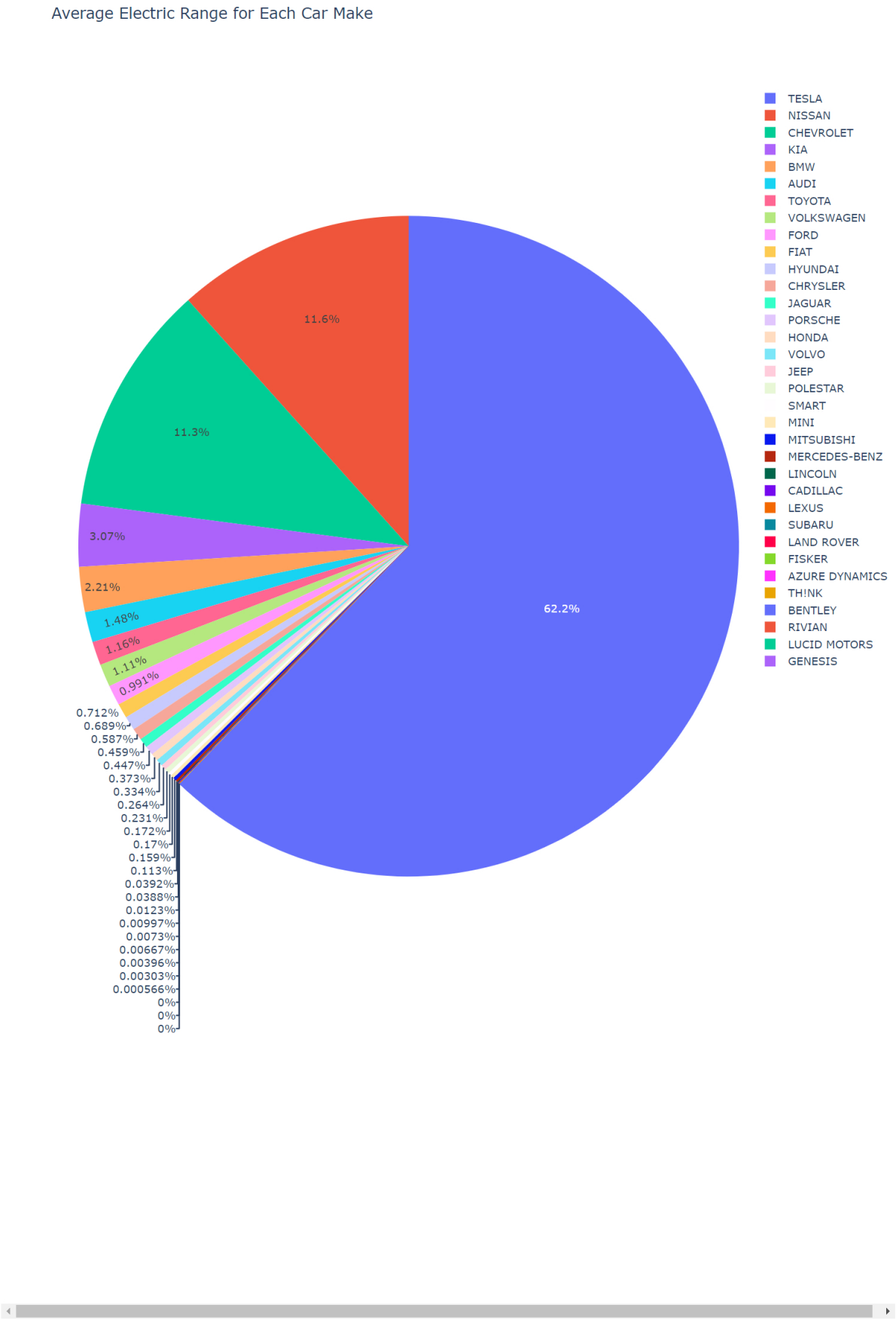


Bivariate Box Plot

In [6]:
```
box_fig = px.box(df, x='Make', y='Electric Range', title='Bivariate Box Plot of Electric Range across Different Car Makes')
box_fig.show()
```



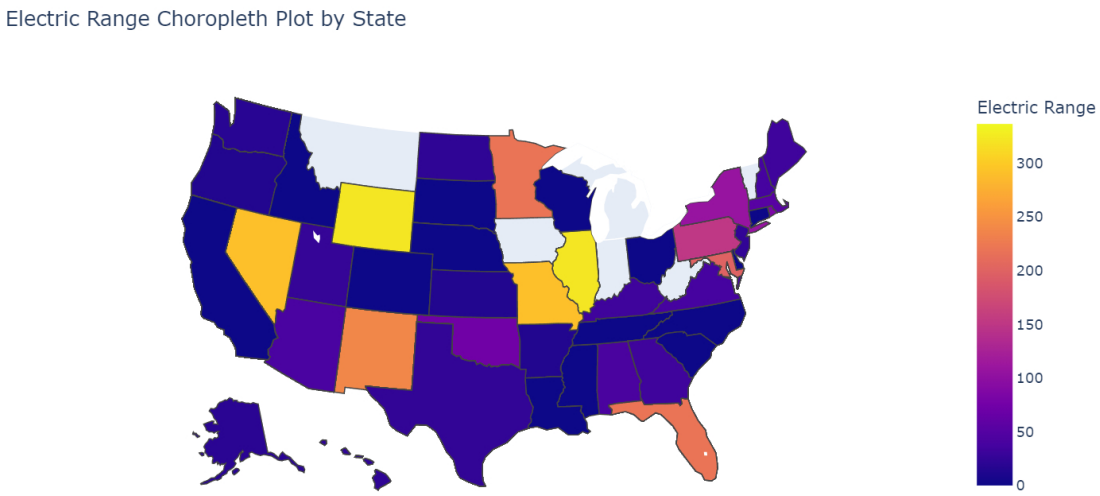
In [7]:
```
px.pie(df, names='Make', values='Electric Range', title='Average Electric Range for Each Car Make',width=1000, height=1500)
show()
```



Bivariate Analysis - Choropleth Plot

In [10]:
```
choropleth_fig = px.choropleth(df, locations='State', locationmode='USA-states', color='Electric Range', scope="usa",
                               title='Electric Range Choropleth Plot by State')
choropleth_fig.show()
```

```
4
```



Choropleth to display the number of EV vehicles based on location.

In [11]:
```
1 imated_choropleth_fig = px.choropleth(df, locations='State', locationmode='USA-states', color='Electric Range', scope="usa",
2                                       animation_frame='Model Year',
3                                       title='Animated Electric Range Choropleth Plot by State over Model Years')
4 imated_choropleth_fig.show()
5
```