In [35]:

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

In [36]:

```
crashes = sns.load_dataset('car_crashes')
crashes.head()
```

Out[36]:

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses	abbrev
0	18.8	7.332	5.640	18.048	15.040	784.55	145.08	AL
1	18.1	7.421	4.525	16.290	17.014	1053.48	133.93	AK
2	18.6	6.510	5.208	15.624	17.856	899.47	110.35	AZ
3	22.4	4.032	5.824	21.056	21.280	827.34	142.39	AR
4	12.0	4.200	3.360	10.920	10.680	878.41	165.63	CA

In [2]:

```
crashes.describe()
```

Out[2]:

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses
count	51.000000	51.000000	51.000000	51.000000	51.000000	51.000000	51.000000
mean	15.790196	4.998196	4.886784	13.573176	14.004882	886.957647	134.493137
std	4.122002	2.017747	1.729133	4.508977	3.764672	178.296285	24.835922
min	5.900000	1.792000	1.593000	1.760000	5.900000	641.960000	82.750000
25%	12.750000	3.766500	3.894000	10.478000	11.348000	768.430000	114.645000
50%	15.600000	4.608000	4.554000	13.857000	13.775000	858.970000	136.050000
75%	18.500000	6.439000	5.604000	16.140000	16.755000	1007.945000	151.870000
max	23.900000	9.450000	10.038000	23.661000	21.280000	1301.520000	194.780000

In [3]:

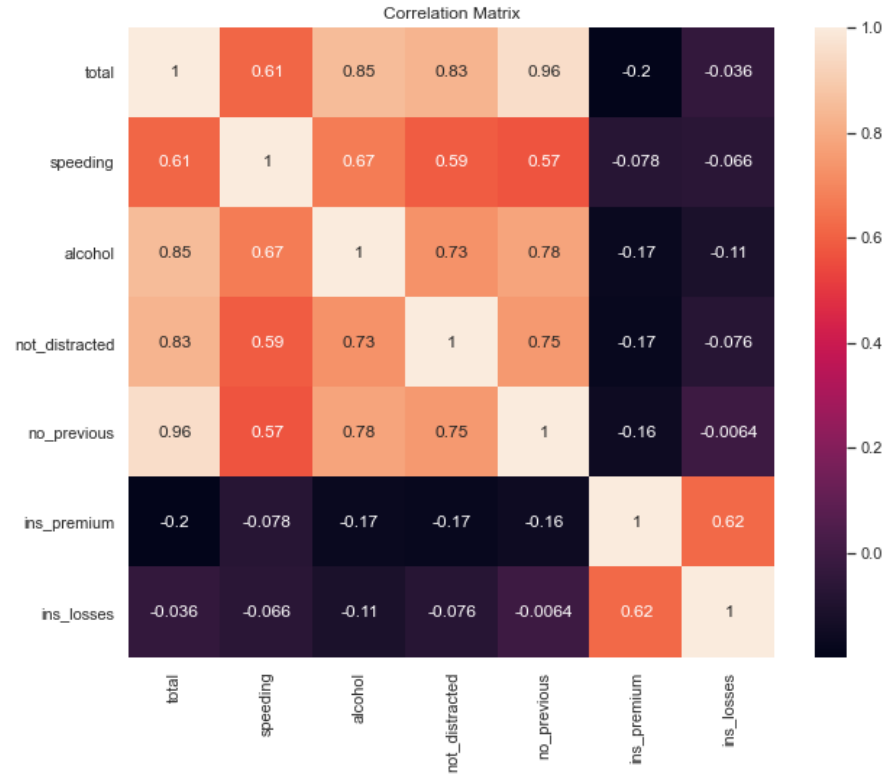
```
crashes.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 51 entries, 0 to 50
Data columns (total 8 columns):
 #   Column          Non-Null Count  Dtype  
---  ------          --------------  -----  
 0   total           51 non-null     float64
 1   speeding        51 non-null     float64
 2   alcohol         51 non-null     float64
 3   not_distracted  51 non-null     float64
 4   no_previous     51 non-null     float64
 5   ins_premium     51 non-null     float64
 6   ins_losses      51 non-null     float64
 7   abbrev          51 non-null     object 
dtypes: float64(7), object(1)
memory usage: 3.3+ KB
```

In [60]:

```
cmap='rocket')

ved in accidents have no prior history of crashes\n          Driving under the influence of alcohol is a major cause of car cr
```



Inference - Most of the people involved in accidents have no prior history of crashes
Driving under the influence of alcohol is a major cause of car crashes

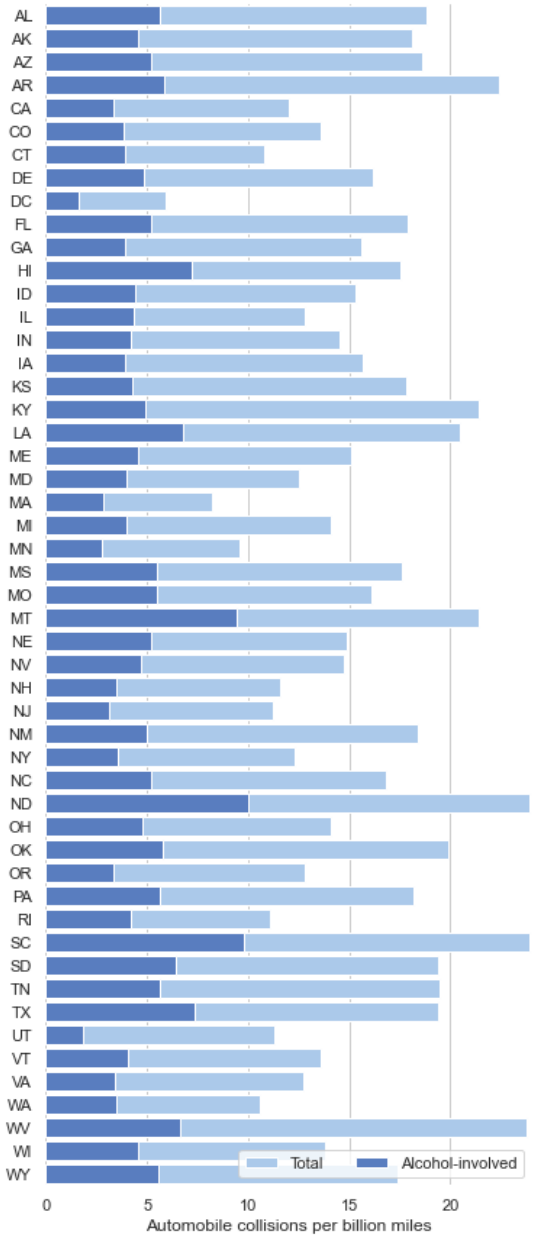
In [62]:

```
sns.set_theme(style="whitegrid")
f, ax = plt.subplots(figsize=(6, 15))
sns.set_color_codes("pastel")
sns.barplot(x="total", y="abbrev", data=crashes,
            label="Total", color="b")

# Plot the crashes where alcohol was involved
sns.set_color_codes("muted")
sns.barplot(x="alcohol", y="abbrev", data=crashes,
            label="Alcohol-involved", color="b")


ax.legend(ncol=2, loc="lower right", frameon=True)
ax.set(xlim=(0, 24), ylabel="",
       xlabel="Automobile collisions per billion miles")
sns.despine(left=True, bottom=True)
print("Inference - Shows us the portion of the total accidents caused by alcohol in each state")
```

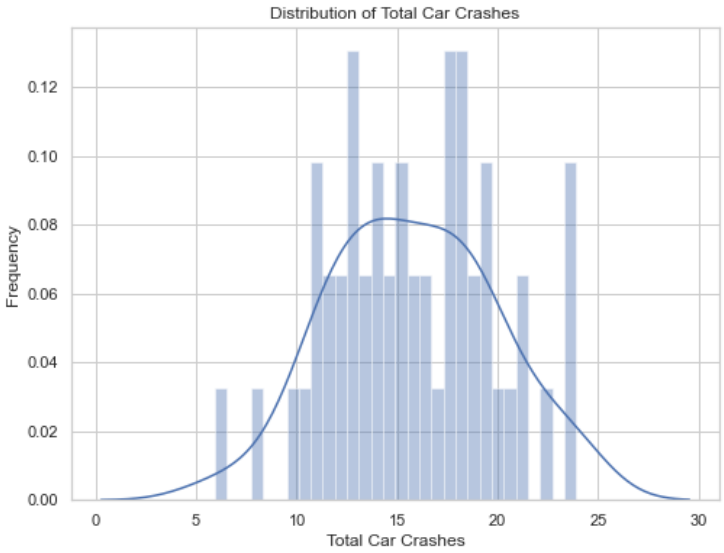
```
Inference - Shows us the portion of the total accidents caused by alcohol in each state
```



In [63]:

```
plt.figure(figsize=(8, 6))
sns.distplot(crashes['total'], bins=30)
plt.xlabel('Total Car Crashes')
plt.ylabel('Frequency')
plt.title('Distribution of Total Car Crashes')
plt.show()
print("Inference - This plot shows us the distribution of car crashes")
```

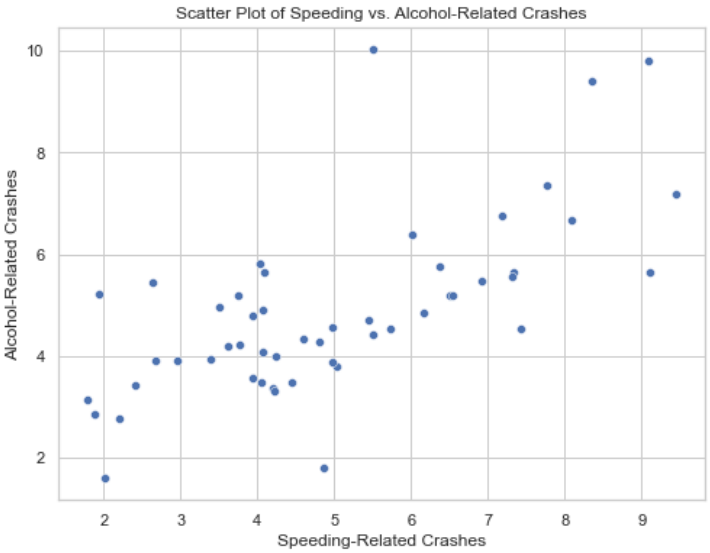
```
C:\Users\chinm\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a depreca
ted function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-l
evel function with similar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```




```
Inference - This plot shows us
```

In [72]:

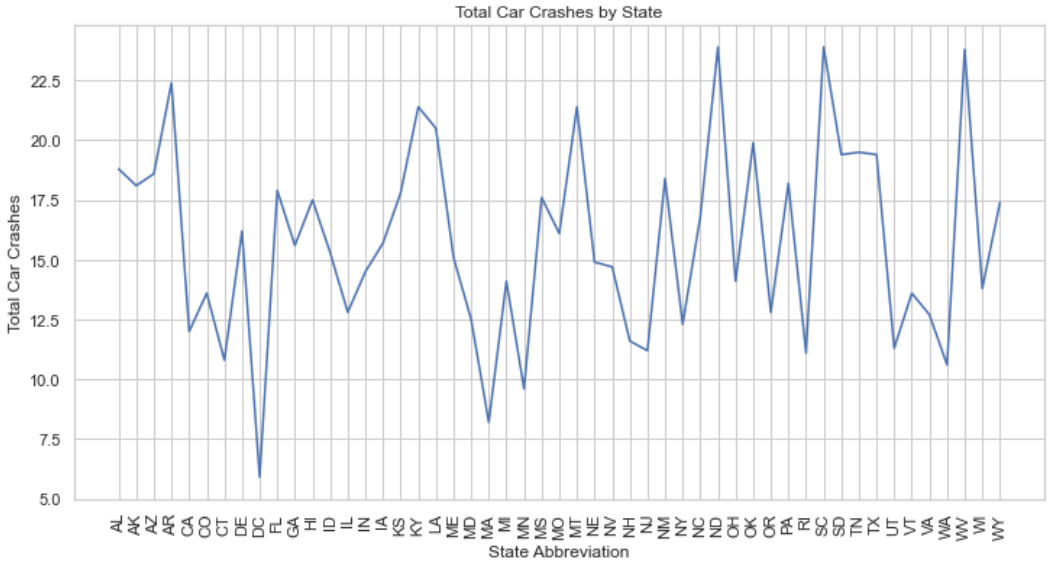
```
ure(figsize=(8, 6))
tterplot(x='speeding', y='alcohol', data=crashes)
bel('Speeding-Related Crashes')
bel('Alcohol-Related Crashes')
le('Scatter Plot of Speeding vs. Alcohol-Related Crashes')
w()
Inference - This plot has a +ve correlation which could mean driving under influence could also cause speeding related crashes
```




```
Inference - This plot has a +ve correlation which could mean driving under influence could also cause speeding r
elated crashes
```

In [84]:

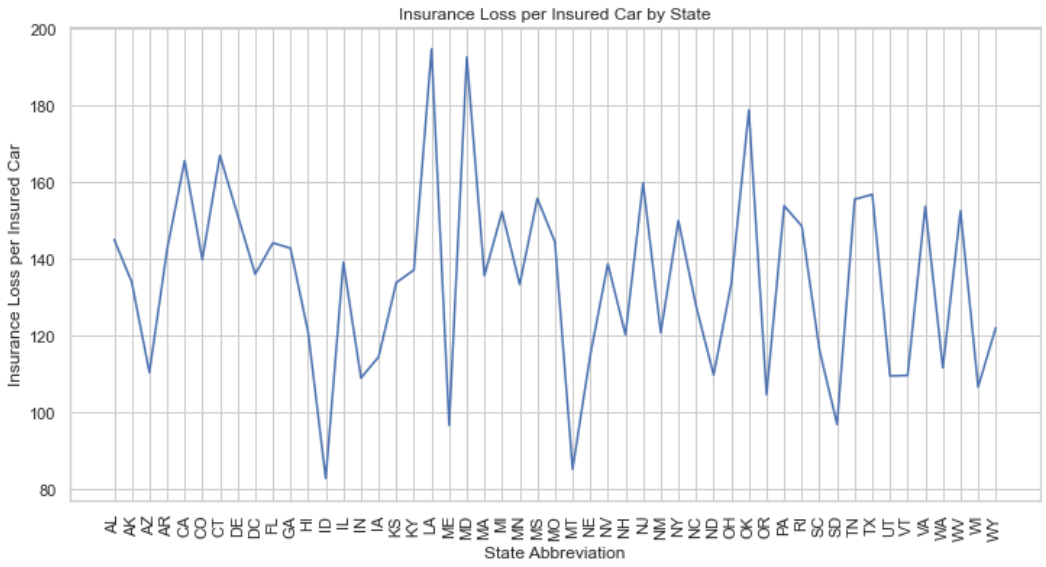
```
plt.figure(figsize=(12, 6))
sns.lineplot(x='abbrev', y='total', data=crashes, palette='mako')
plt.xlabel('State Abbreviation')
plt.ylabel('Total Car Crashes')
plt.title('Total Car Crashes by State')
plt.xticks(rotation=90)
plt.show()
print('Inference - This plot lets us compare Total Car Crashes by State from which we can see North Dakota and South Carolina t
```



Inference - This plot lets us compare Total Car Crashes by State from which we can see North Dakota and South Ca
rolina to be the states with the most no. of crashes-23.9

In [80]:

```
plt.figure(figsize=(12, 6))
sns.lineplot(x='abbrev', y='ins_losses', data=crashes, palette='mako')
plt.xlabel('State Abbreviation')
plt.ylabel('Insurance Loss per Insured Car')
plt.title('Insurance Loss per Insured Car by State')
plt.xticks(rotation=90)
plt.show()
print('Inference - This plot shows us losses of insurance companies per insured car in the state')
```



Inference - This plot shows us losses of insurance companies per insured car in the state