# AYAZ AHMED

## 21BRS1304

```
import numpy as np
import pandas as pd
import seaborn as sb
import matplotlib.pyplot as plt
```

```
from google.colab import drive
drive.mount('/content/drive')
```

```
df = pd.read_csv("/content/drive/MyDrive/AIML Course/car_crashes.csv")
df.head()
```

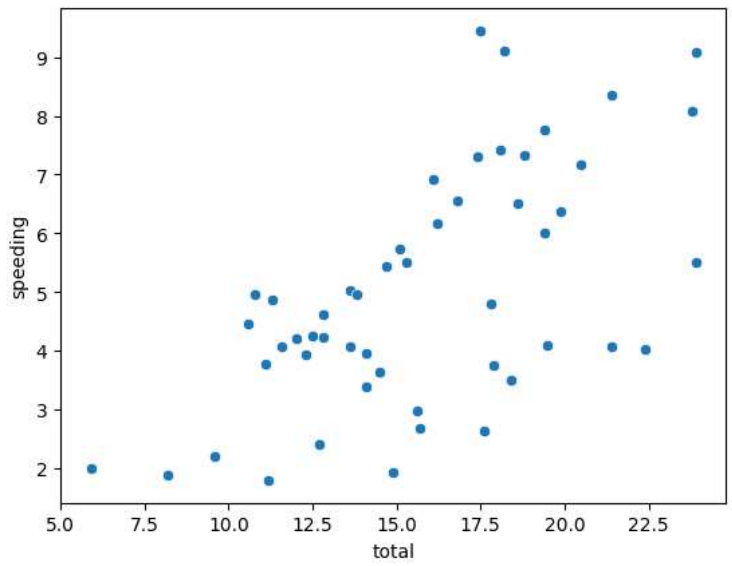
| | total | speeding | alcohol | not_distracted | no_previous | ins_premium | ins_losses | ab |
|---|---|---|---|---|---|---|---|---|
| **0** | 18.8 | 7.332 | 5.640 | 18.048 | 15.040 | 784.55 | 145.08 | |
| **1** | 18.1 | 7.421 | 4.525 | 16.290 | 17.014 | 1053.48 | 133.93 | |
| **2** | 18.6 | 6.510 |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

```
df.tail()
```

| | total | speeding | alcohol | not_distracted | no_previous | ins_premium | ins_losses | a |
|---|---|---|---|---|---|---|---|---|
| **46** | 12.7 | 2.413 | 3.429 | 11.049 | 11.176 | 768.95 | 153.72 | |
| **47** | 10.6 | 4.452 | 3.498 | 8.692 | 9.116 | 890.03 | 111.62 | |
| **48** | 23.8 | 8.092 | 6.664 | 23.086 | 20.706 | 992.61 | 152.56 | |
| **49** | 13.8 | 4.968 | 4.554 | 5.382 | 11.592 | 670.31 | 106.62 | |
| **50** | 17.4 | 7.308 | 5.568 | 14.094 | 15.660 | 791.14 | 122.04 | |

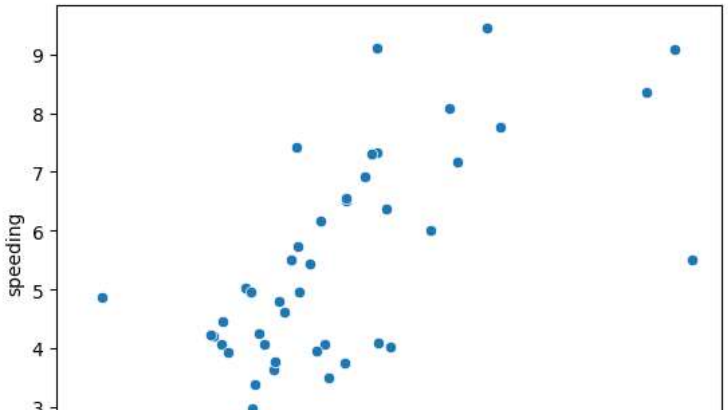
```
sb.scatterplot(x = "total", y = "speeding", data = df)
```

```
<Axes: xlabel='total', ylabel='speeding'>
```



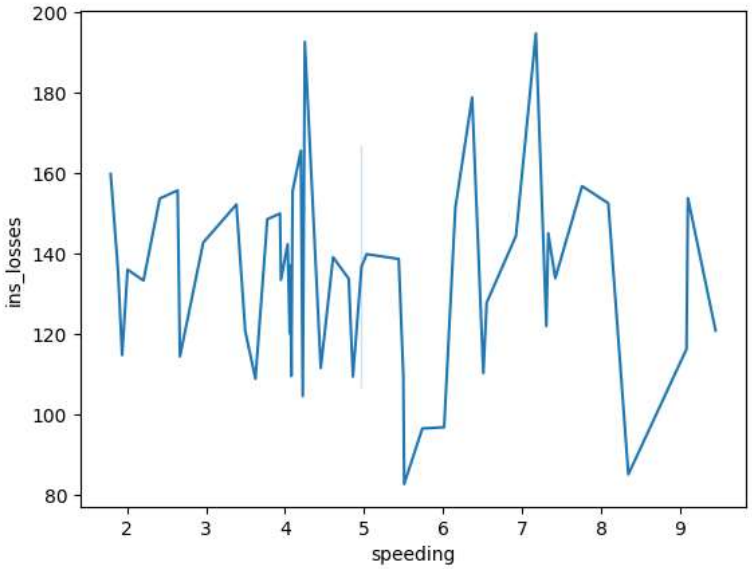

```
sb.scatterplot(x = "alcohol", y = "speeding", data = df)
```

```
<Axes: xlabel='alcohol', ylabel='speeding'>
```



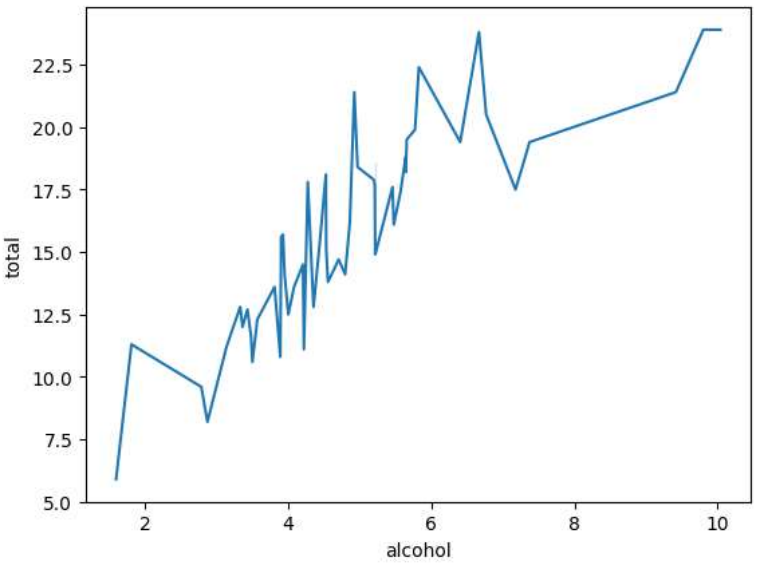

```
sb.lineplot(x = "speeding", y = "ins_losses", data = df)
```

```
<Axes: xlabel='speeding', ylabel='ins_losses'>
```



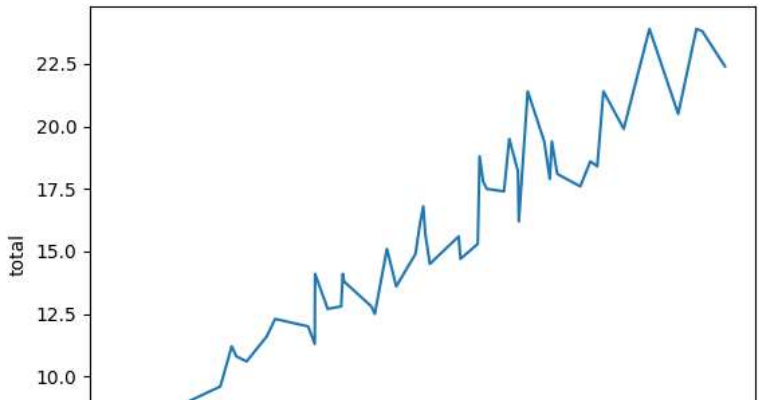

```
sb.lineplot(x = "alcohol", y = "total", data = df)
```

```
<Axes: xlabel='alcohol', ylabel='total'>
```



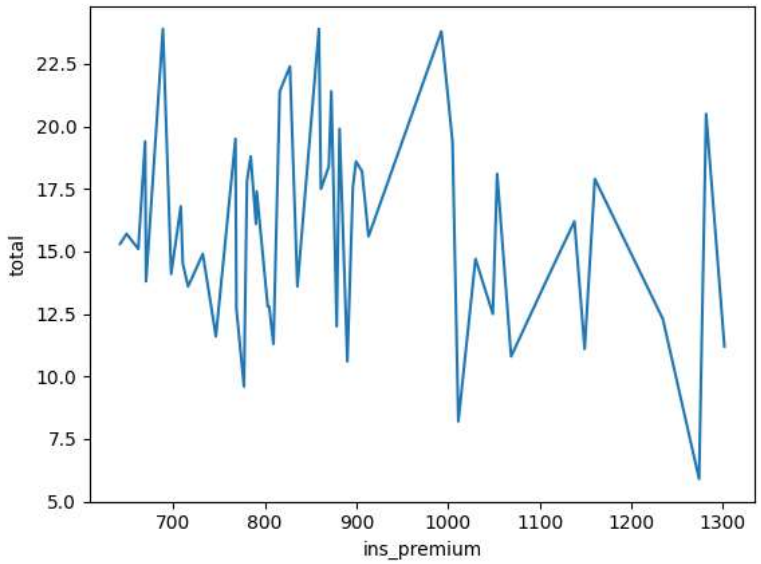

```
sb.lineplot(x = "no_previous", y = "total", data = df)
```

```
<Axes: xlabel='no_previous', ylabel='total'>
```



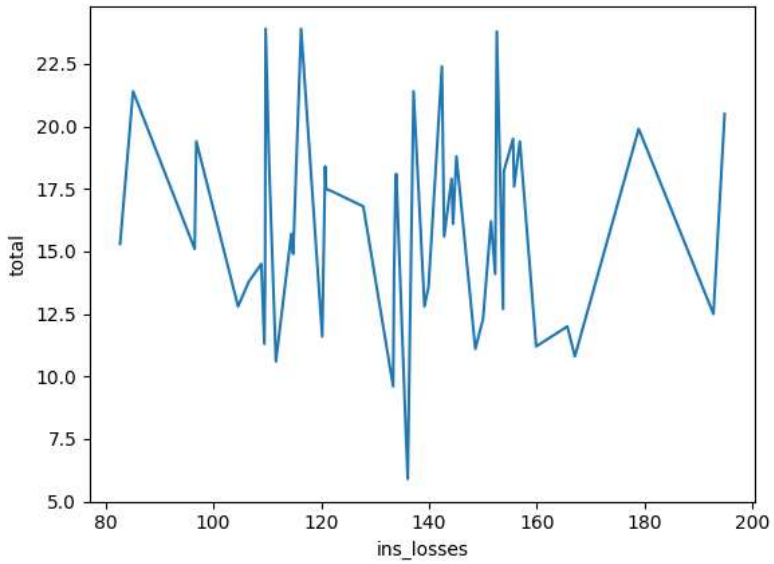

```
sb.lineplot(x = "ins_premium", y = "total", data = df)
```

```
<Axes: xlabel='ins_premium', ylabel='total'>
```



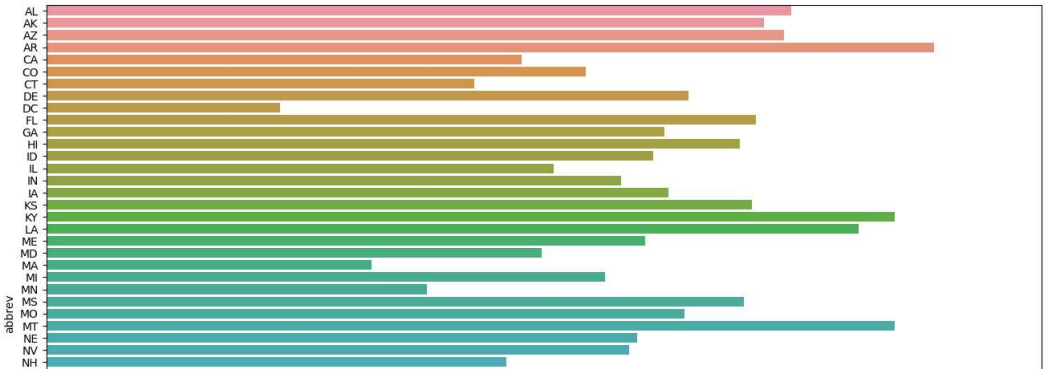

```
sb.lineplot(x = "ins_losses", y = "total", data = df)
```

```
<Axes: xlabel='ins_losses', ylabel='total'>
```



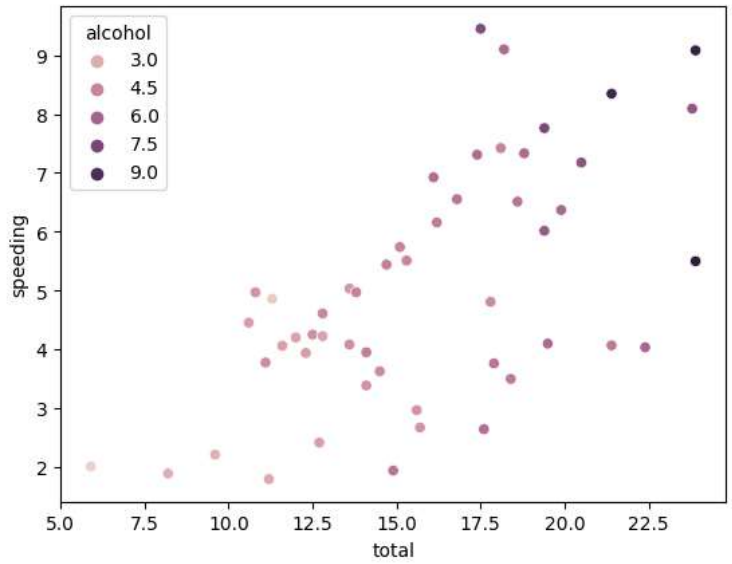

```
plt.subplots(figsize=(16, 10))
sb.barplot(data = df, x = 'total', y = 'abbrev')
```

```
<Axes: xlabel='total', ylabel='abbrev'>
```



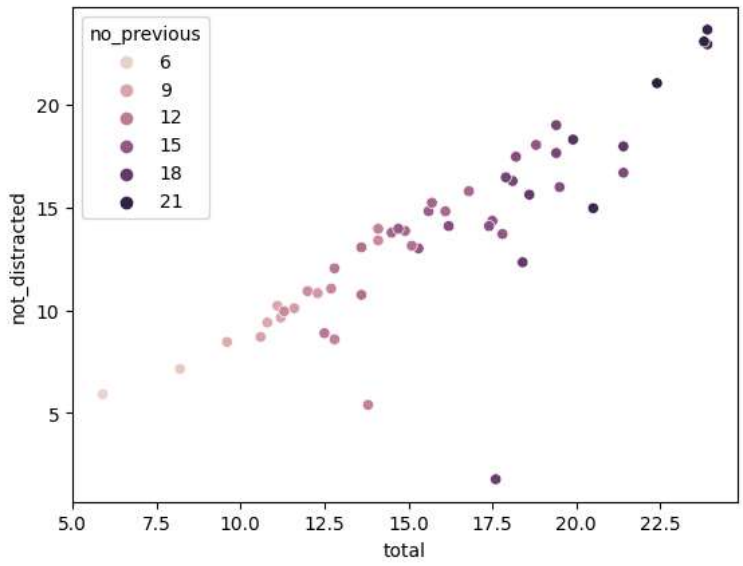

```
sb.scatterplot(x = "total", y = "speeding", data = df, hue = 'alcohol')
```

```
<Axes: xlabel='total', ylabel='speeding'>
```



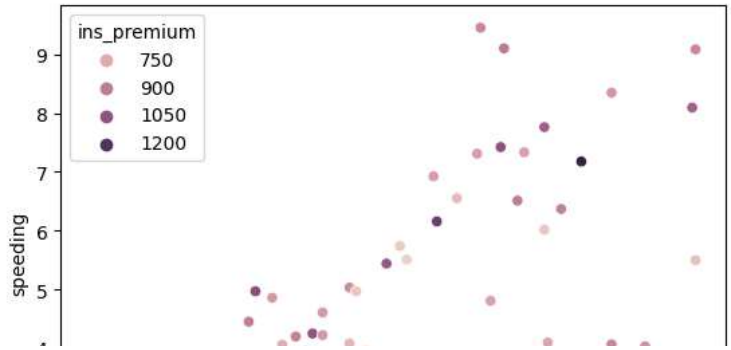

```
sb.scatterplot(x = "total", y = "not_distracted", data = df, hue = 'no_previous')
```

```
<Axes: xlabel='total', ylabel='not_distracted'>
```



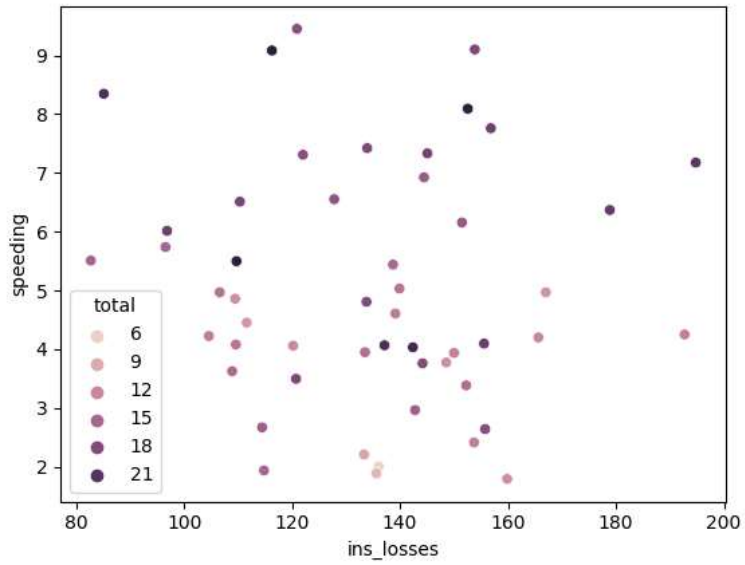

```
sb.scatterplot(x = "total", y = "speeding", data = df, hue = 'ins_premium')
```

```
<Axes: xlabel='total', ylabel='speeding'>
```



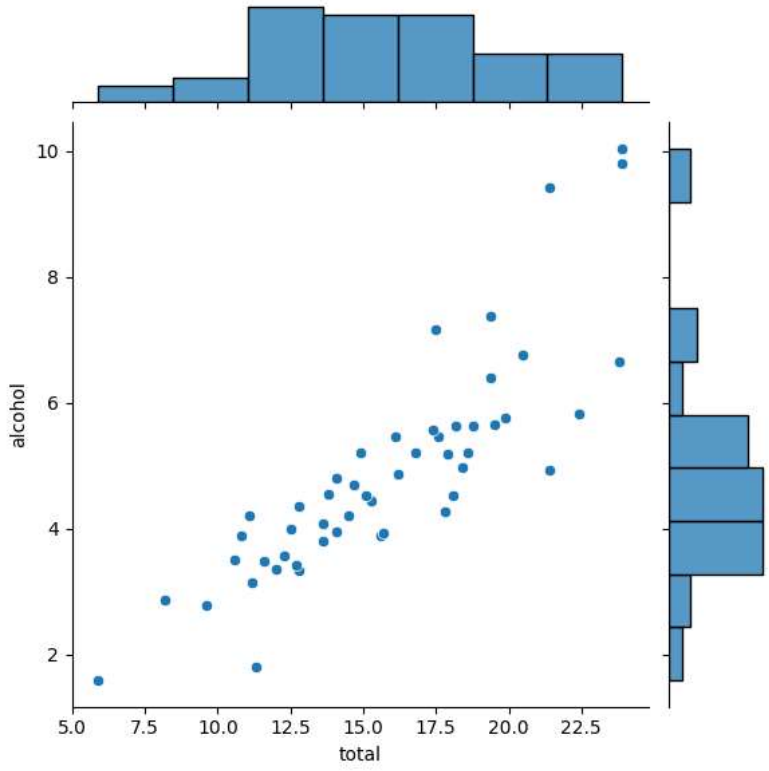

```
sb.scatterplot(x = "ins_losses", y = "speeding", data = df, hue = 'total')
```

```
<Axes: xlabel='ins_losses', ylabel='speeding'>
```



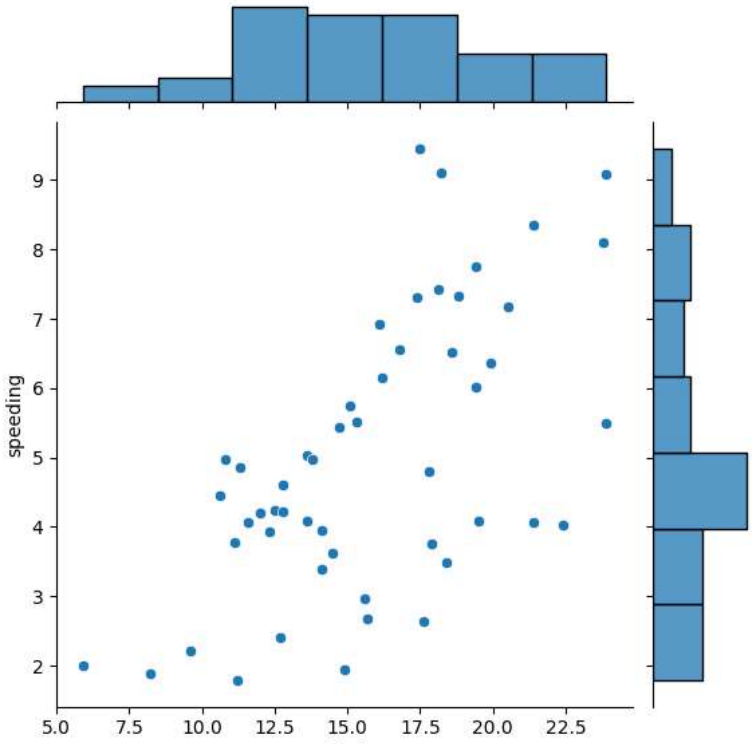

```
sb.jointplot(x = 'total', y = 'alcohol', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0e43550>
```



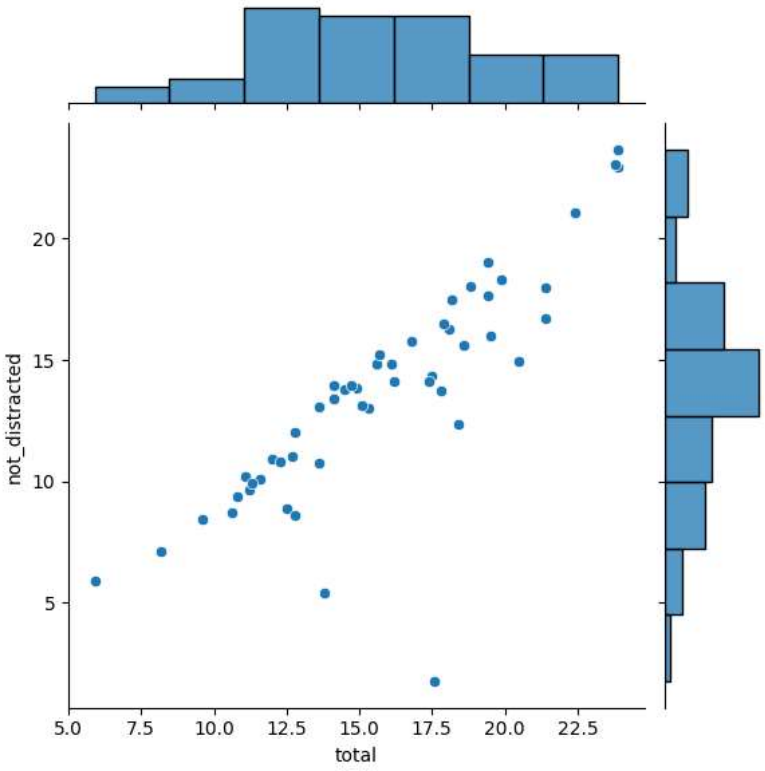

```
sb.jointplot(x = 'total', y = 'speeding', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0e436a0>
```



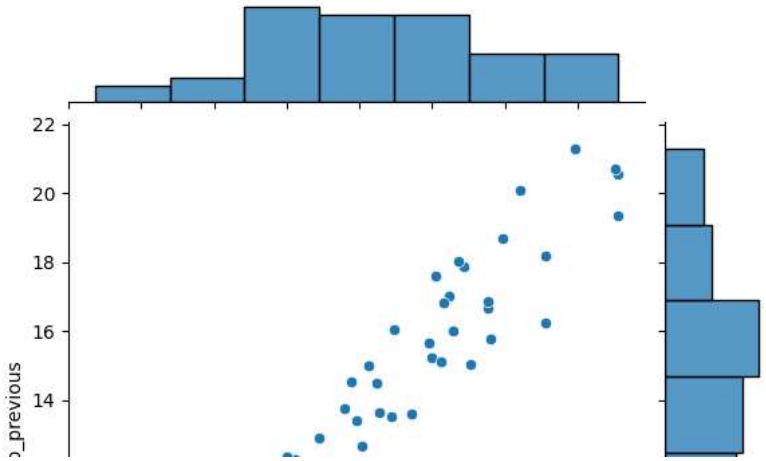

```
sb.jointplot(x = 'total', y = 'not_distracted', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0d79330>
```



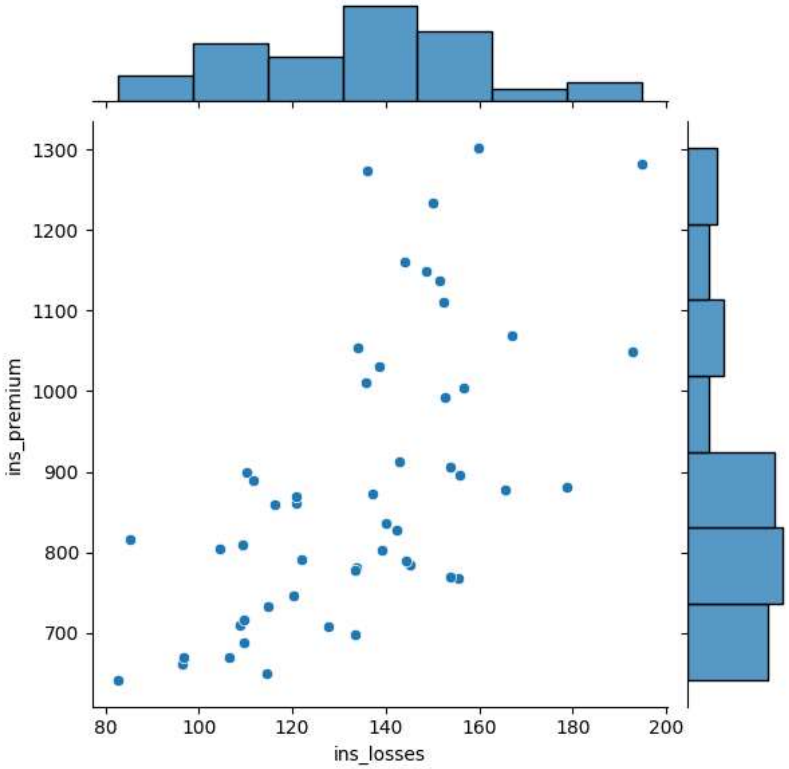

```
sb.jointplot(x = 'total', y = 'no_previous', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0dcc700>
```



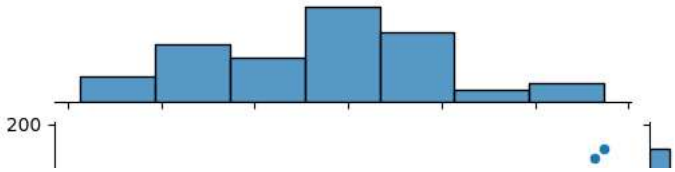

```
sb.jointplot(x = 'ins_losses', y = 'ins_premium', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0985090>
```




```
sb.jointplot(x = 'ins_losses', y = 'ins_losses', data = df)
```

```
<seaborn.axisgrid.JointGrid at 0x7b8bb0985de0>
```

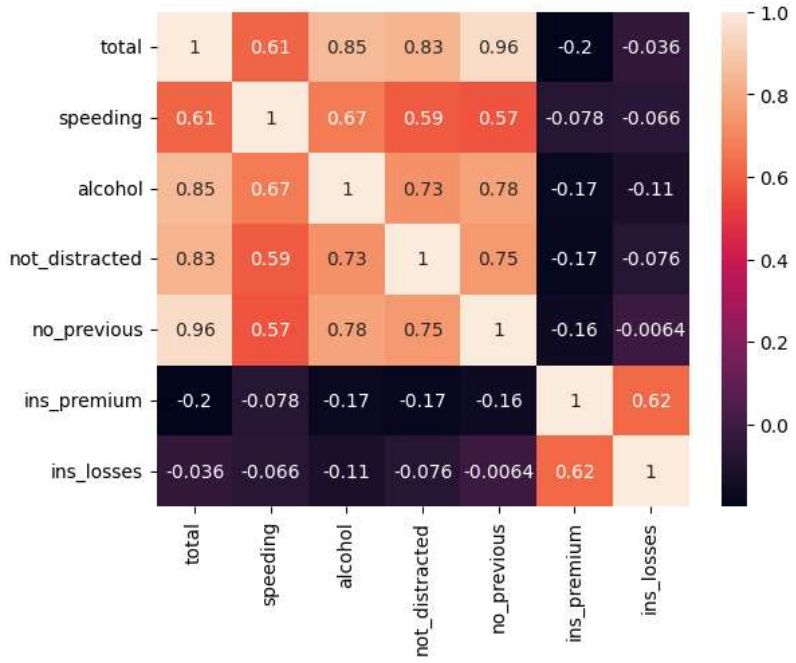



```
corr = df.corr()
```

```
<ipython-input-31-45893e33df67>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future ve
  corr = df.corr()
```

```
sb.heatmap(corr, annot = True)
```

```
<Axes: >
```




```
sb.pairplot(df)
```

```
<seaborn.axisgrid.PairGrid at 0x7b8bafff7e50>
```