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21BAI1671

```
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
\
0   18.8     7.332    5.640          18.048       15.040       784.55

1   18.1     7.421    4.525          16.290       17.014      1053.48

2   18.6     6.510    5.208          15.624       17.856       899.47

3   22.4     4.032    5.824          21.056       21.280       827.34

4   12.0     4.200    3.360          10.920       10.680       878.41


   ins_losses abbrev
0      145.08     AL
1      133.93     AK
2      110.35     AZ
3      142.39     AR
4      165.63     CA
```

```
df.tail()
```

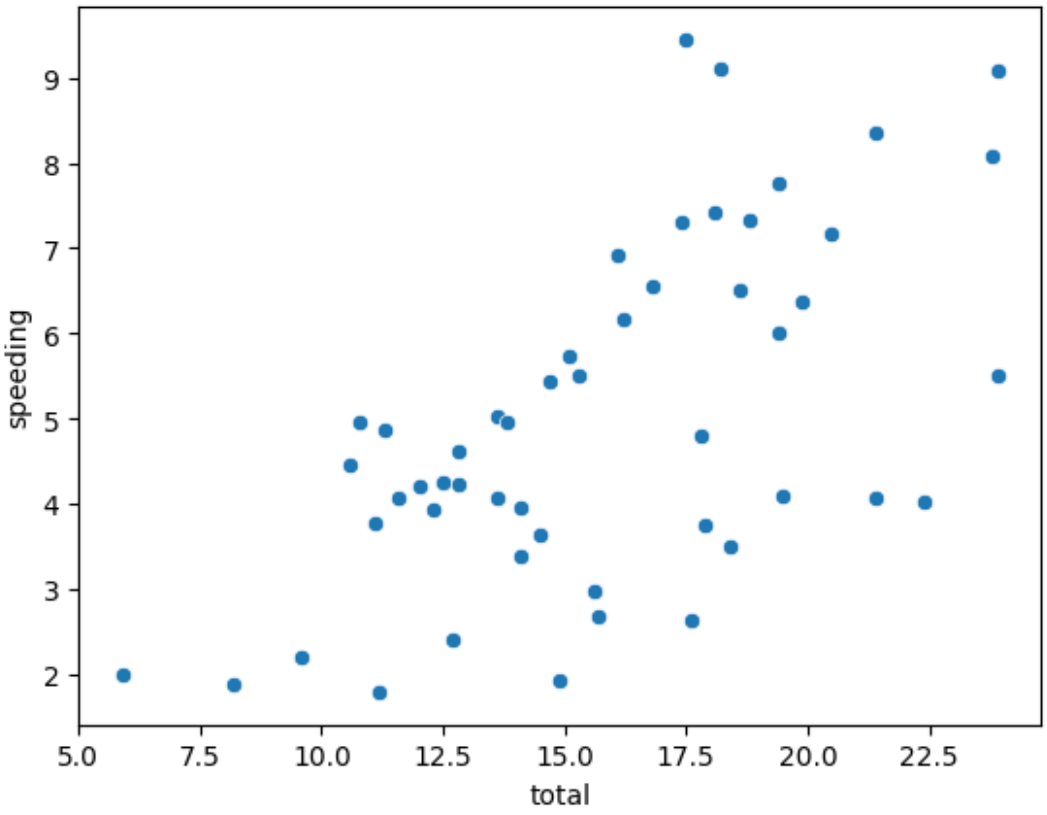
```
    total  speeding  alcohol  not_distracted  no_previous  ins_premium
\
46   12.7     2.413    3.429          11.049       11.176       768.95

47   10.6     4.452    3.498           8.692        9.116       890.03

48   23.8     8.092    6.664          23.086       20.706       992.61

49   13.8     4.968    4.554           5.382       11.592       670.31
```

```
50   17.4      7.308     5.568           14.094        15.660        791.14
```

```
    ins_losses abbrev
46      153.72     VA
47      111.62     WA
48      152.56     WV
49      106.62     WI
50      122.04     WY
```

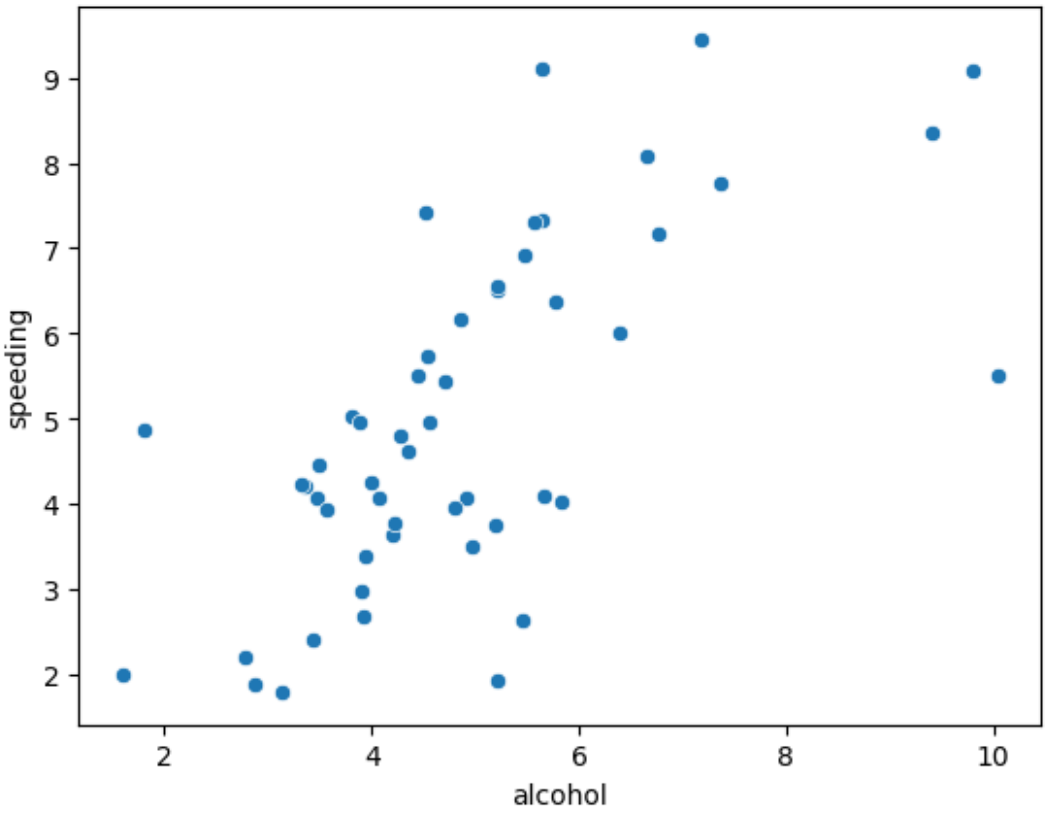
```
sb.scatterplot(x = "total", y = "speeding", data = df)
```

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



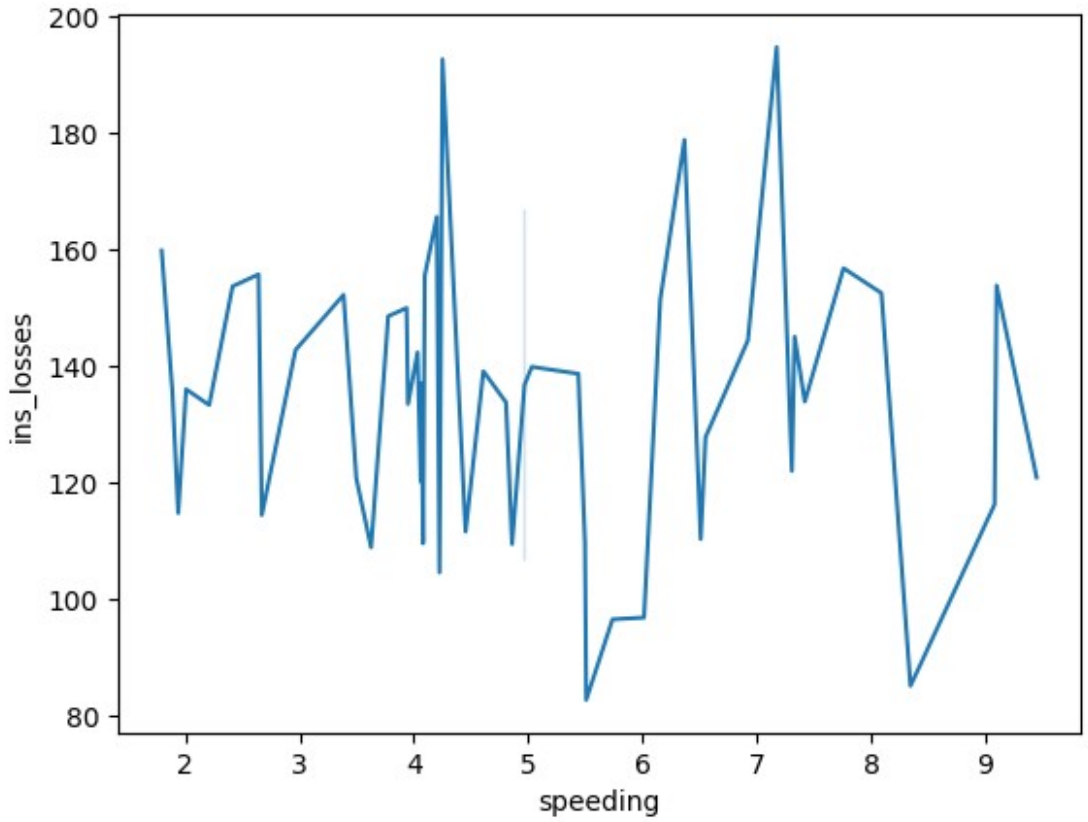

```
sb.scatterplot(x = "alcohol", y = "speeding", data = df)
```

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



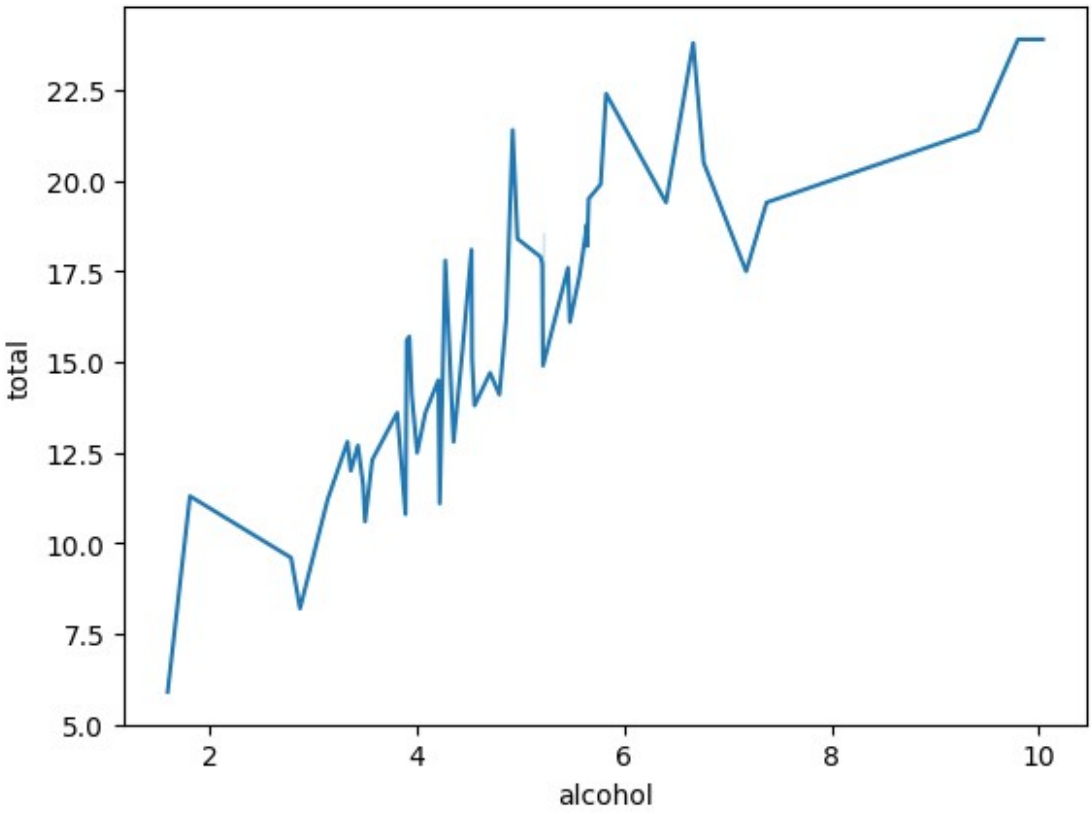

```
sb.lineplot(x = "speeding", y = "ins_losses", data = df)
```

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



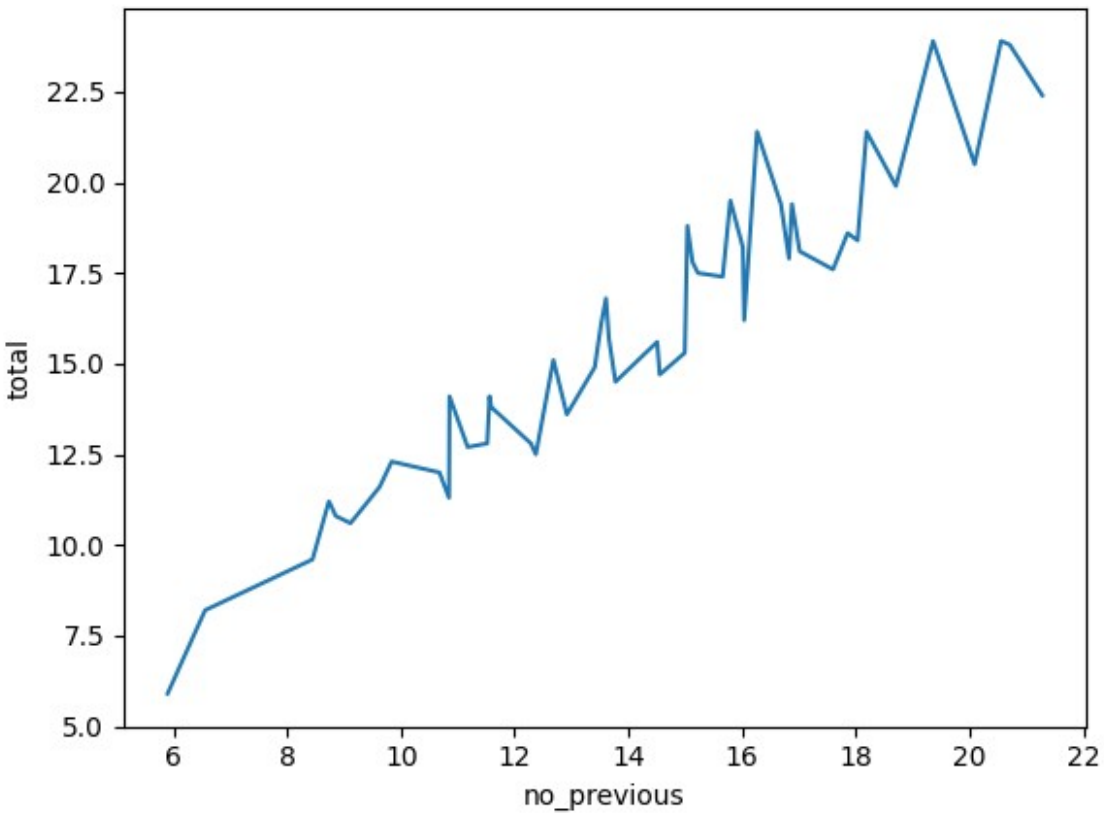

```
sb.lineplot(x = "alcohol", y = "total", data = df)
```

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



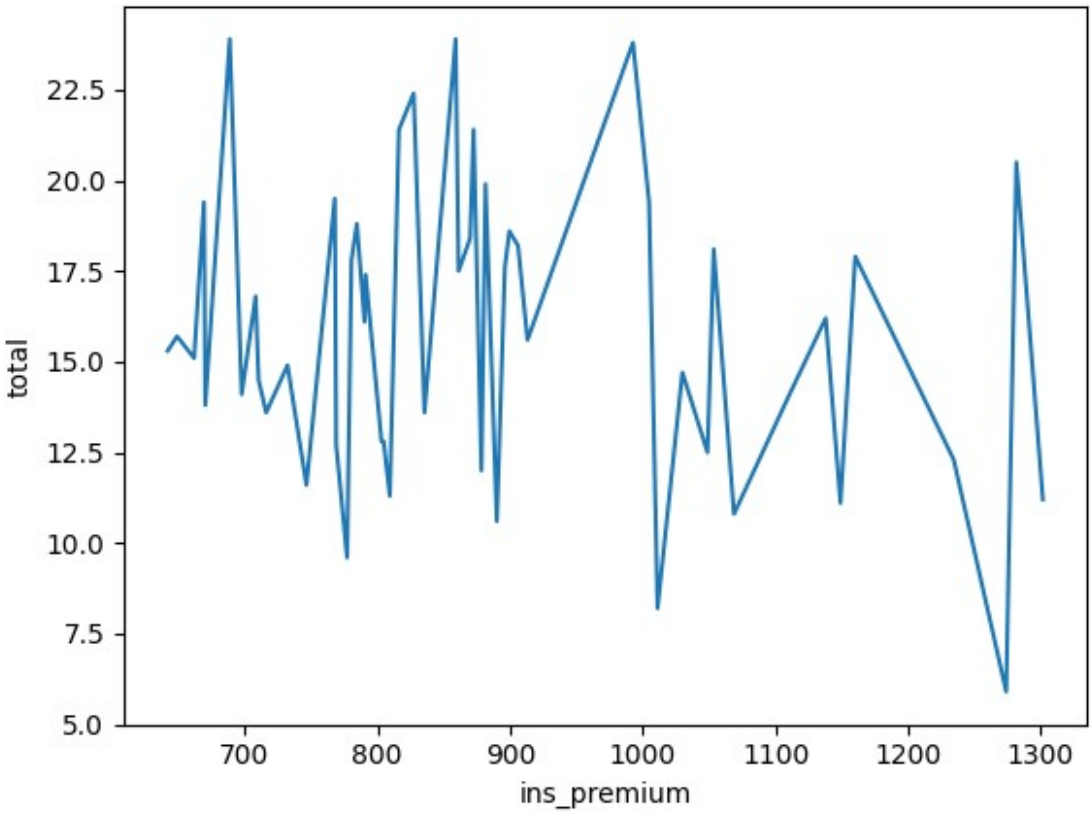

```
sb.lineplot(x = "no_previous", y = "total", data = df)
```

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



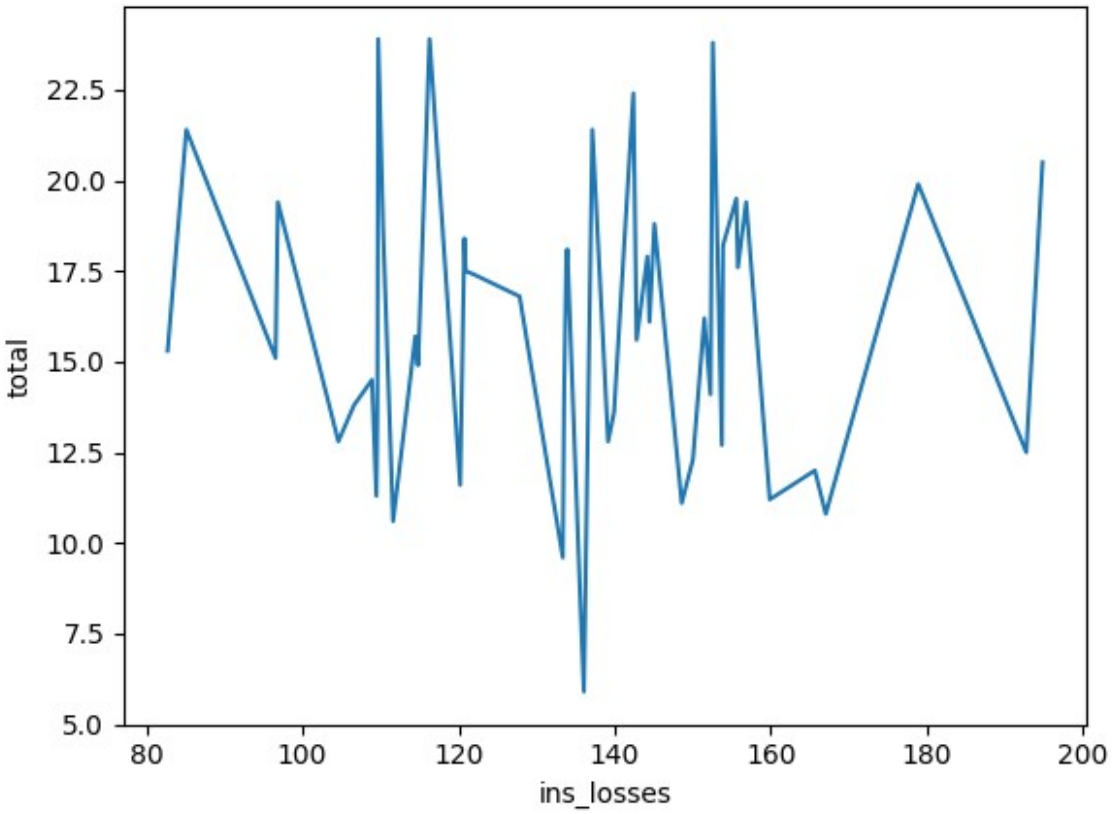

```
sb.lineplot(x = "ins_premium", y = "total", data = df)
```

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



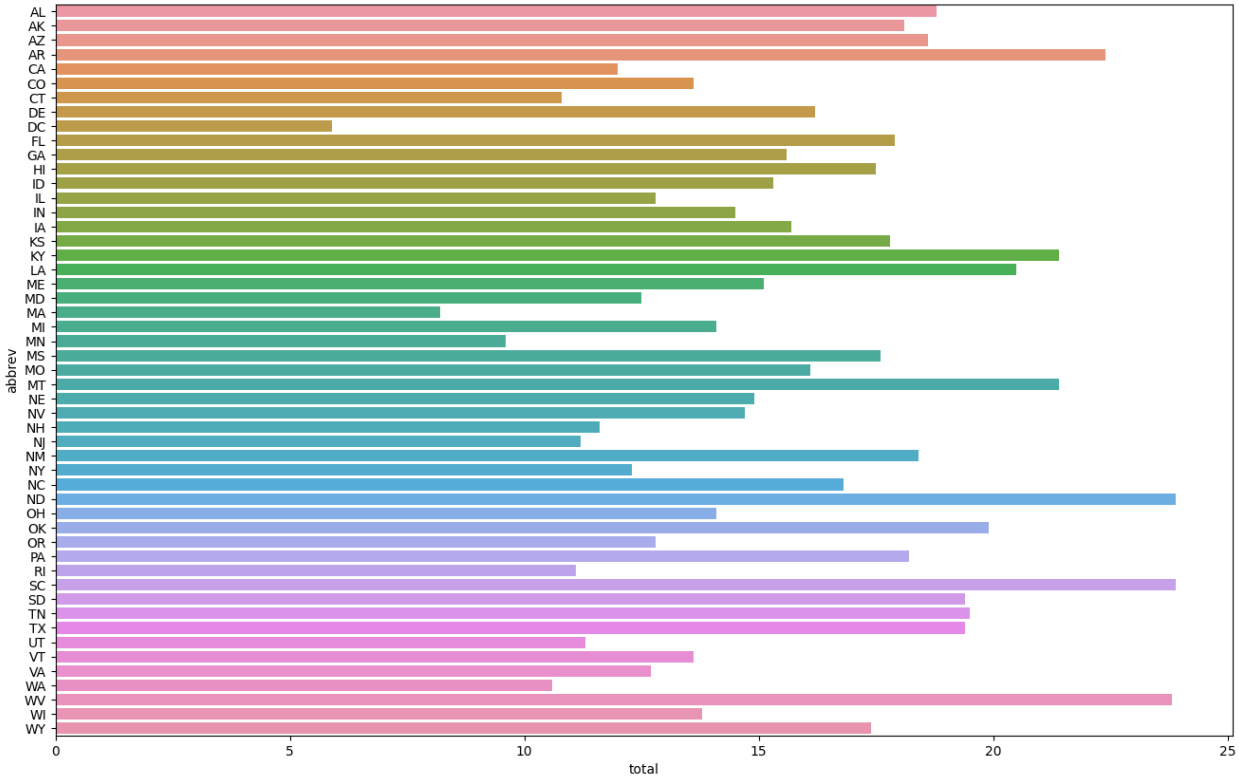

```
sb.lineplot(x = "ins_losses", y = "total", data = df)
```

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



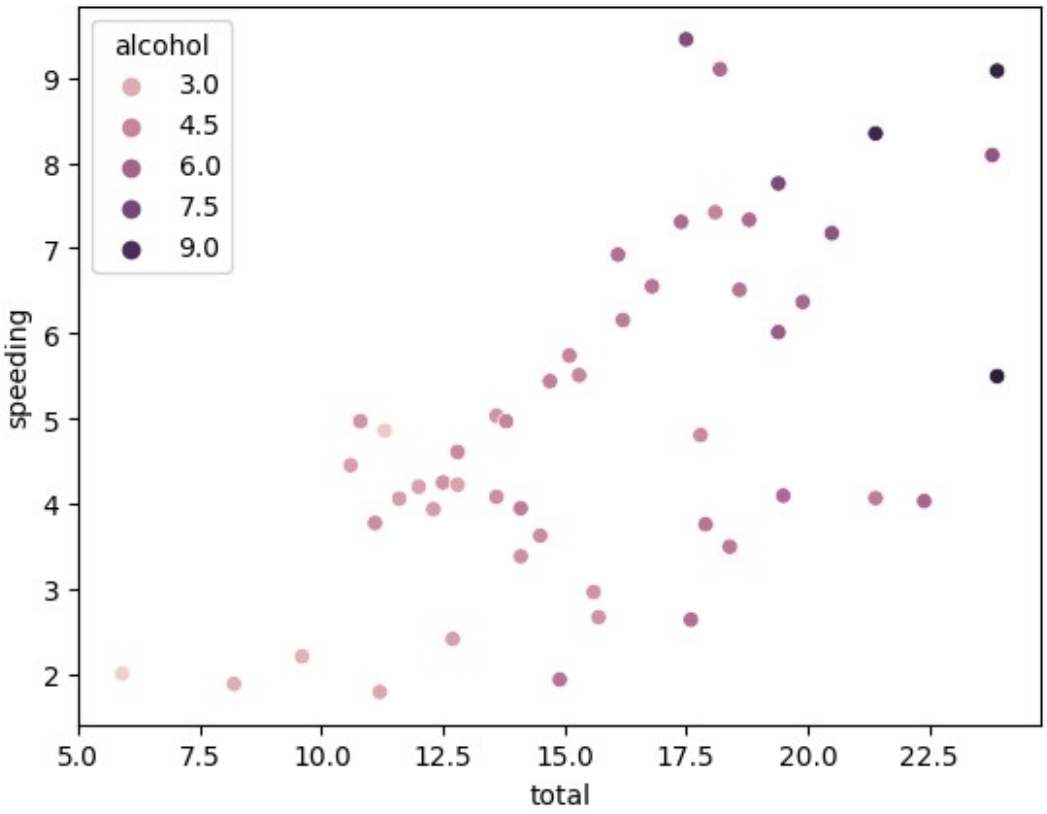

```
plt.subplots(figsize=(16, 10))
sb.barplot(data = df, x = 'total', y = 'abbrev')
```

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



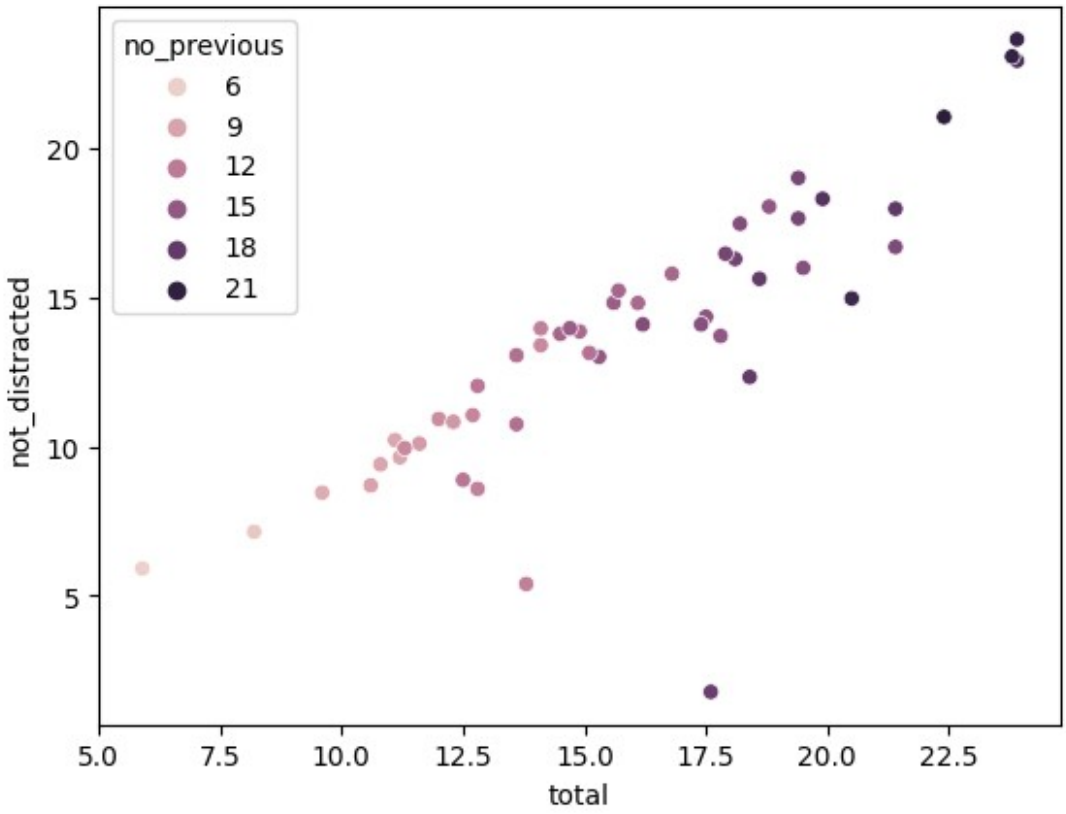

```
sb.scatterplot(x = "total", y = "speeding", data = df, hue =
'alcohol')
```

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



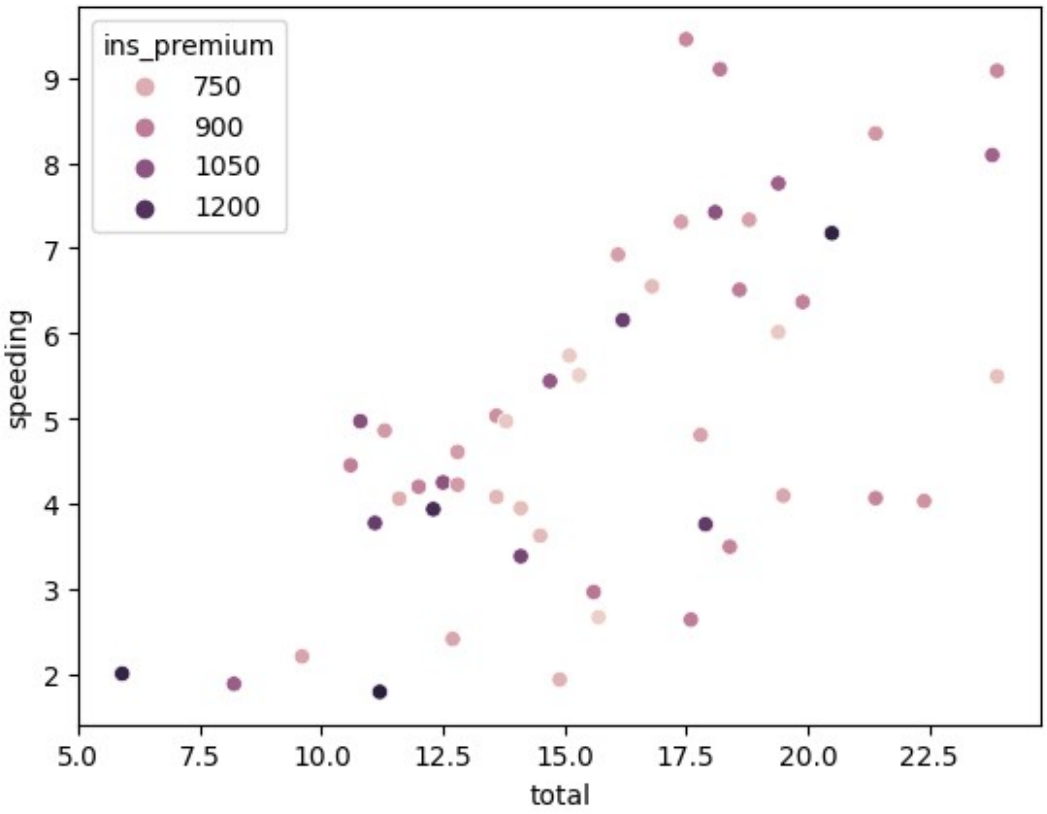

```
sb.scatterplot(x = "total", y = "not_distracted", data = df, hue =
'no_previous')
```

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



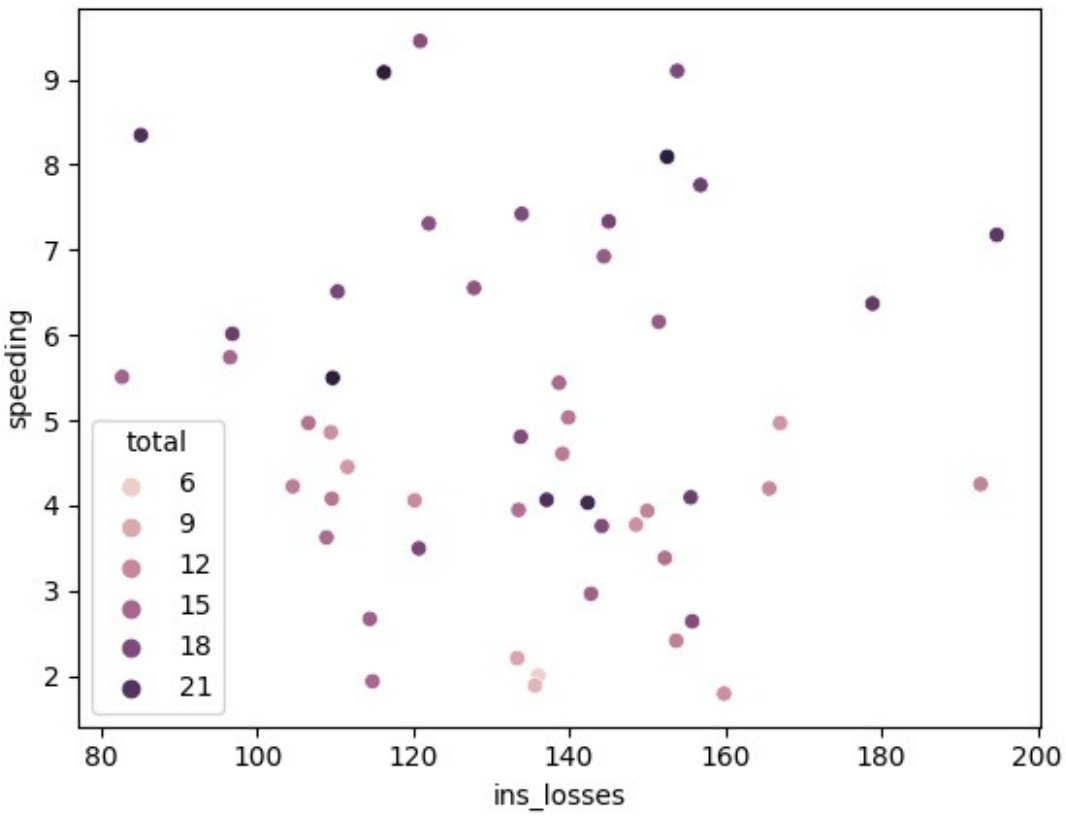

```
sb.scatterplot(x = "total", y = "speeding", data = df, hue =
'ins_premium')
```

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



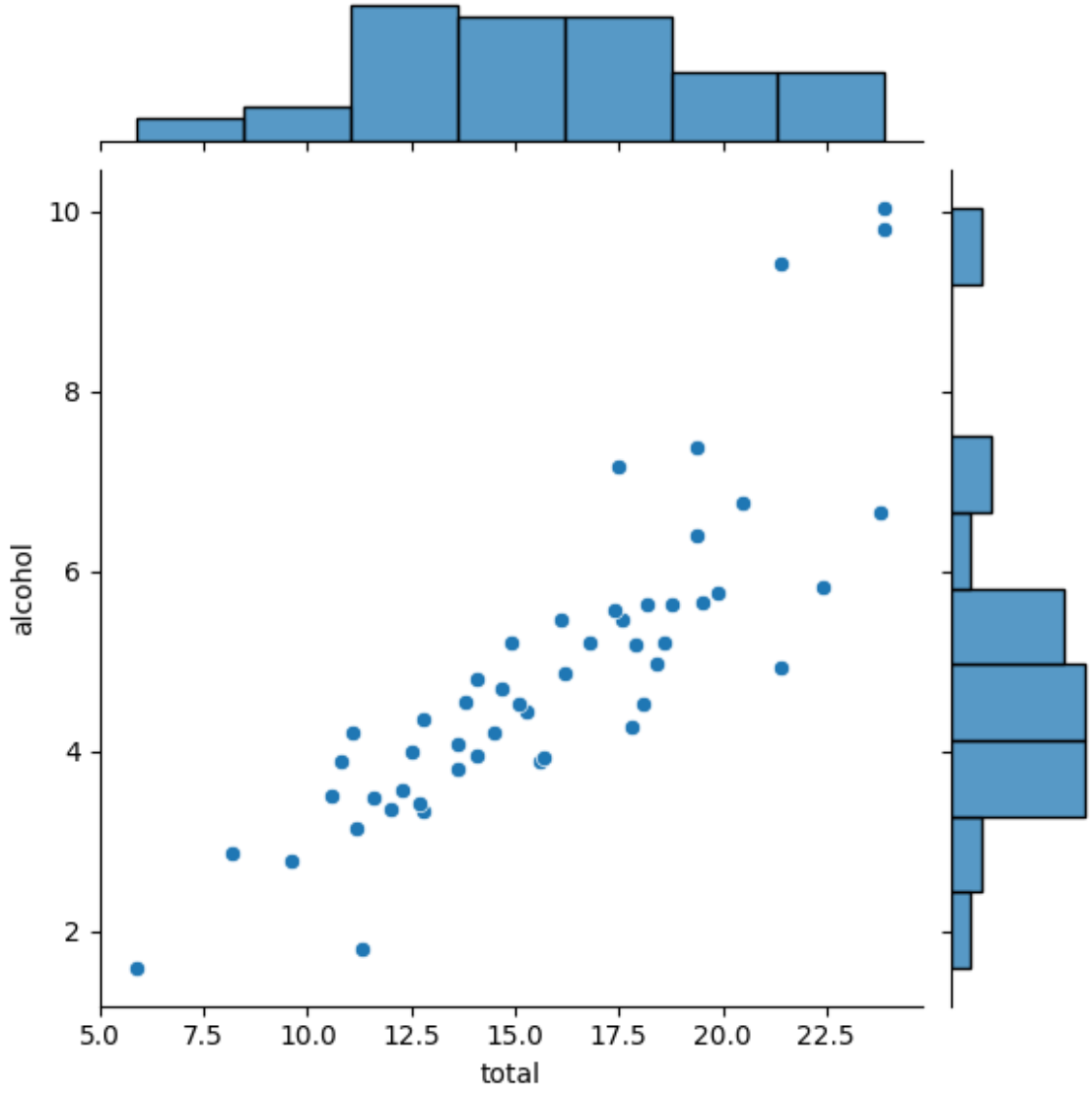

```
sb.scatterplot(x = "ins_losses", y = "speeding", data = df, hue =
'total')
```

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



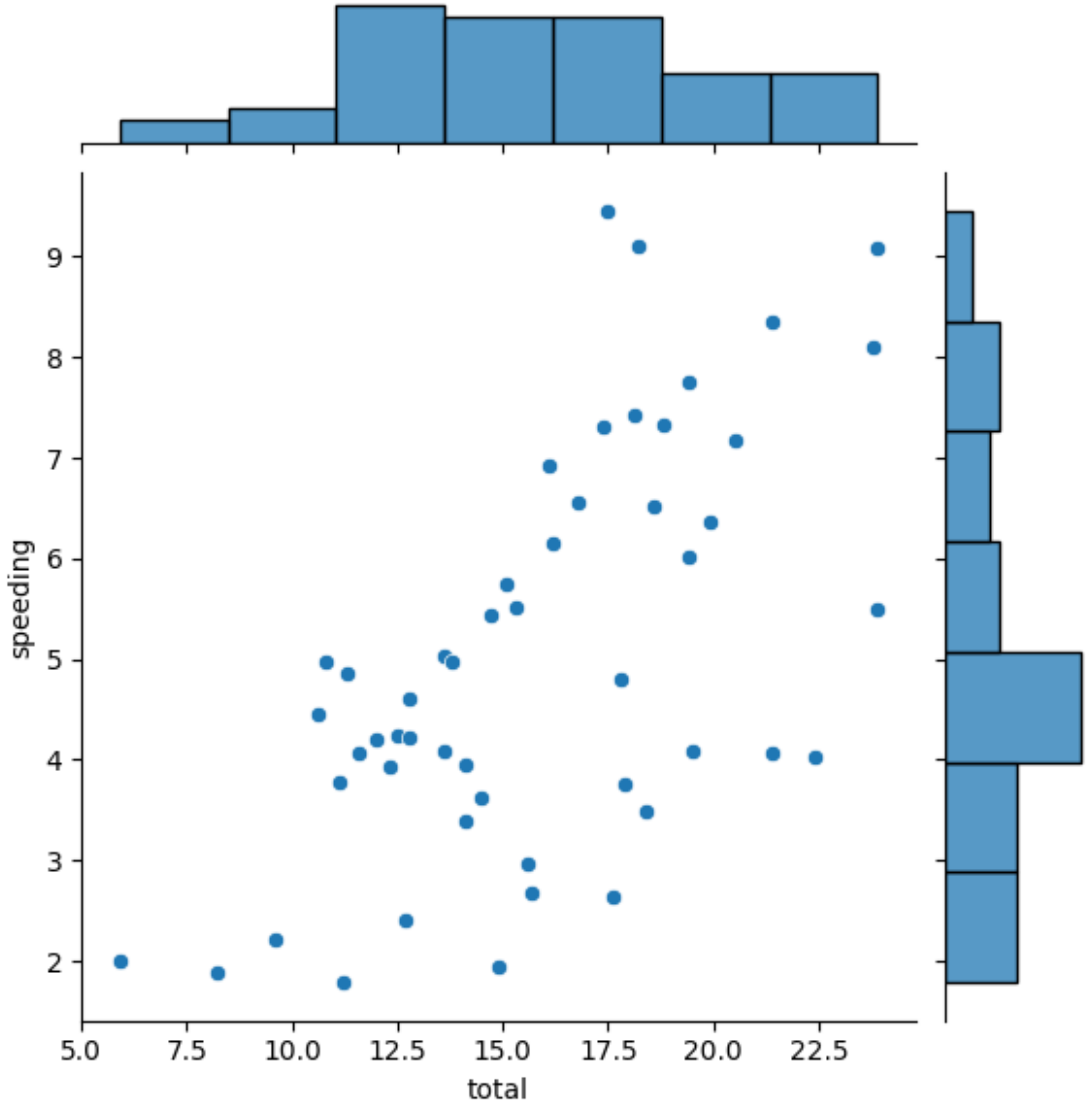

```
sb.jointplot(x = 'total', y = 'alcohol', data = df)
```

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



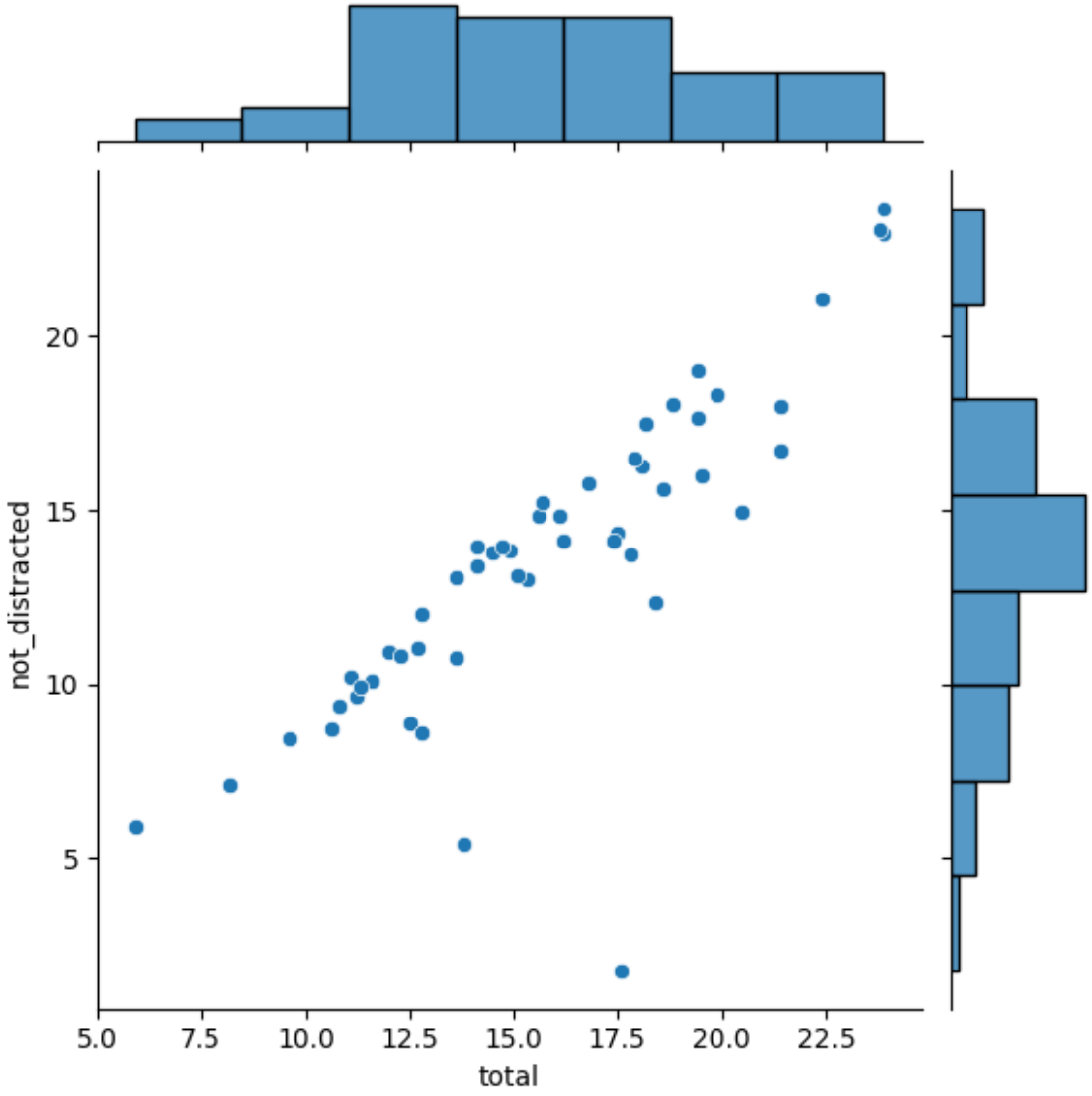

```
sb.jointplot(x = 'total', y = 'speeding', data = df)
```

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



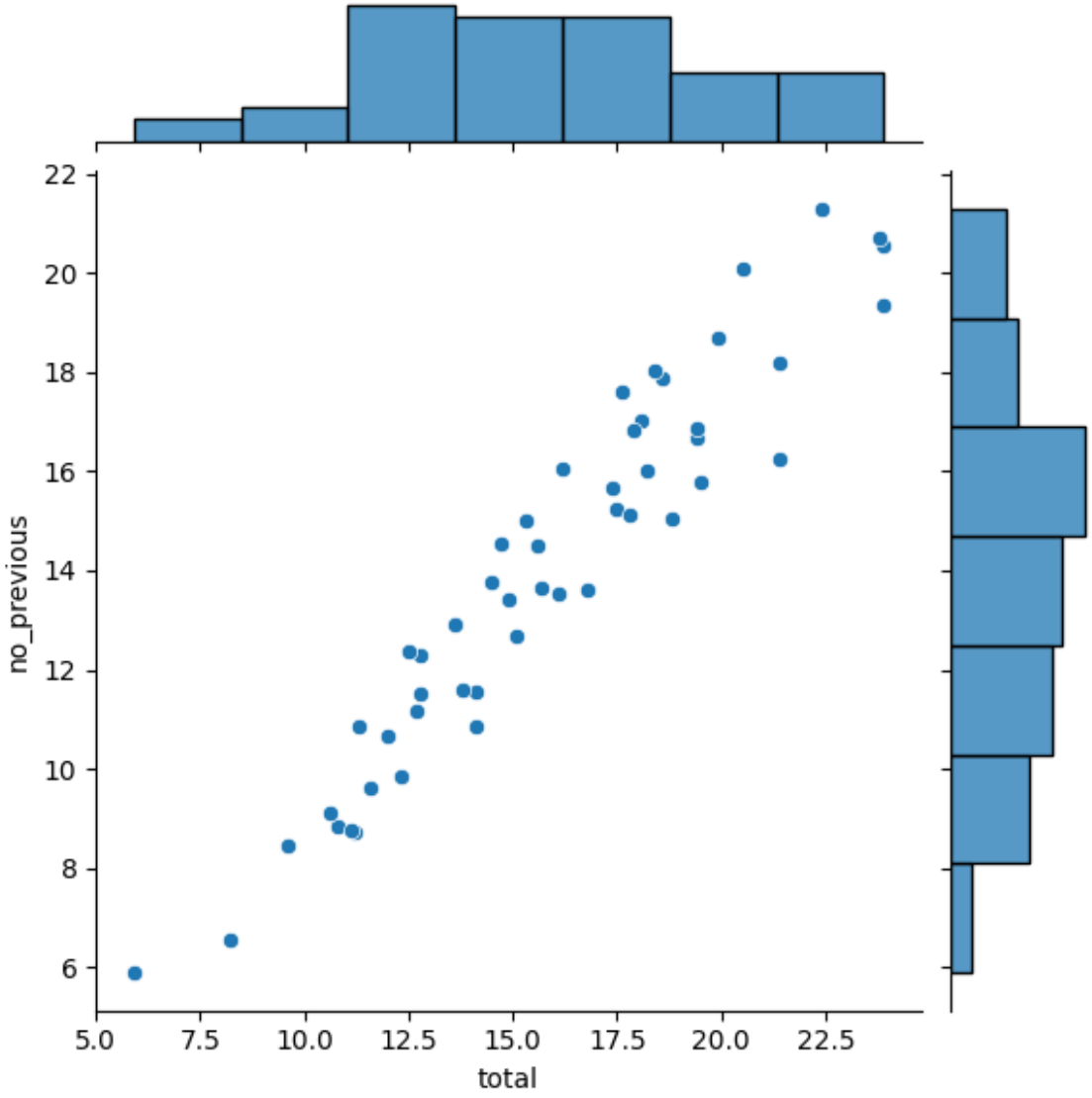

```
sb.jointplot(x = 'total', y = 'not_distracted', data = df)
```

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



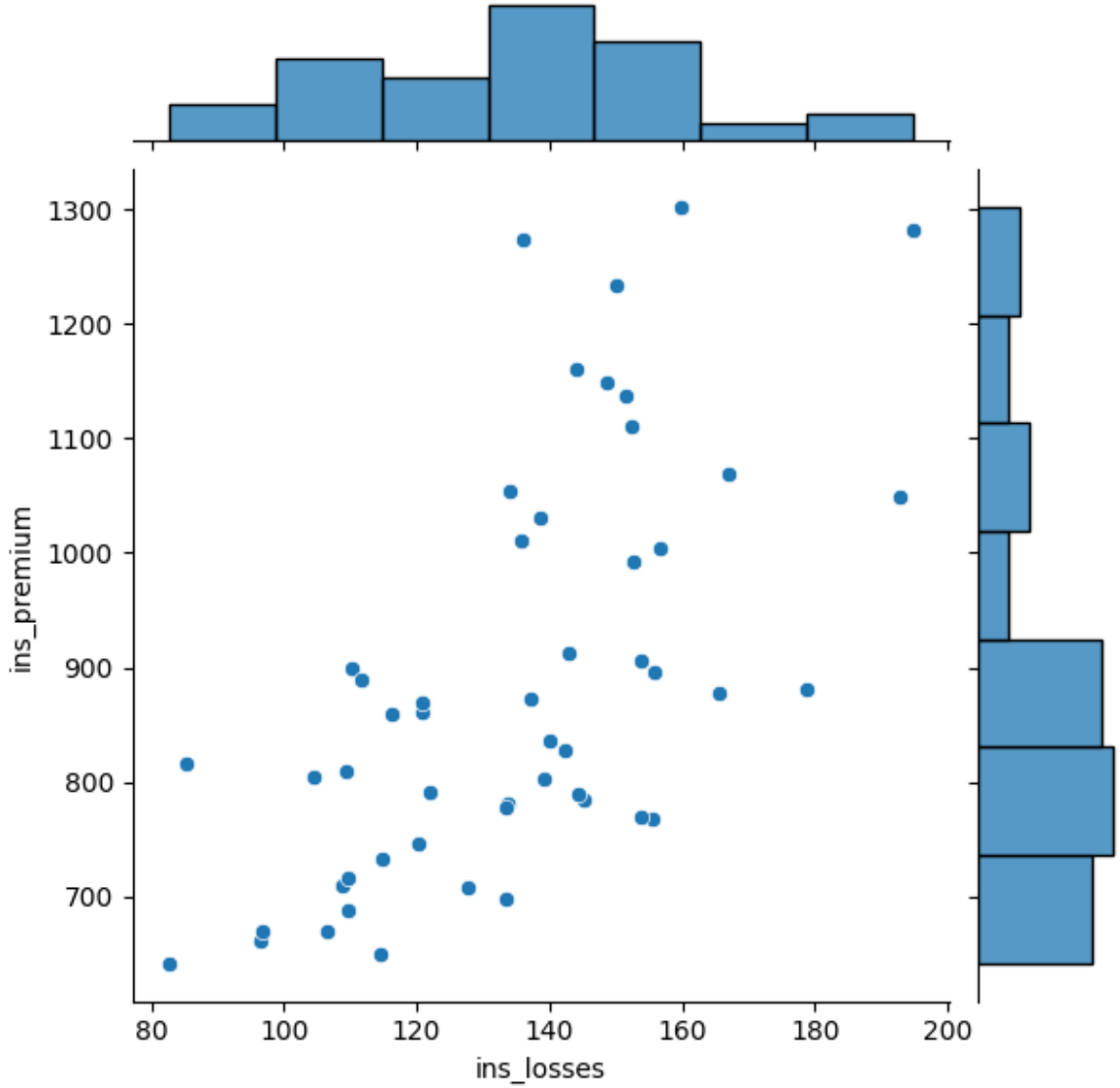

```
sb.jointplot(x = 'total', y = 'no_previous', data = df)
```

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



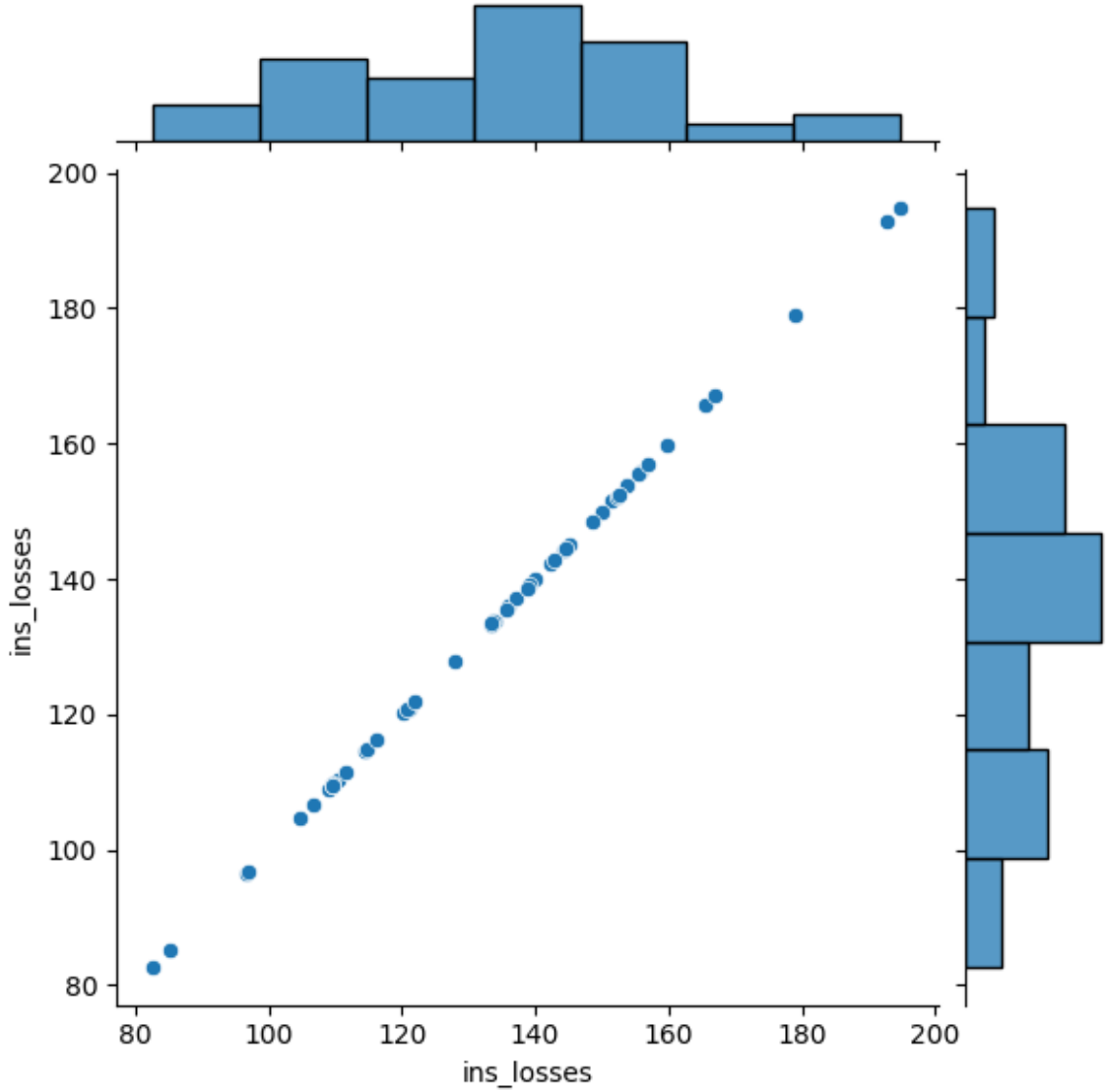

```
sb.jointplot(x = 'ins_losses', y = 'ins_premium', data = df)
```

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




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

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

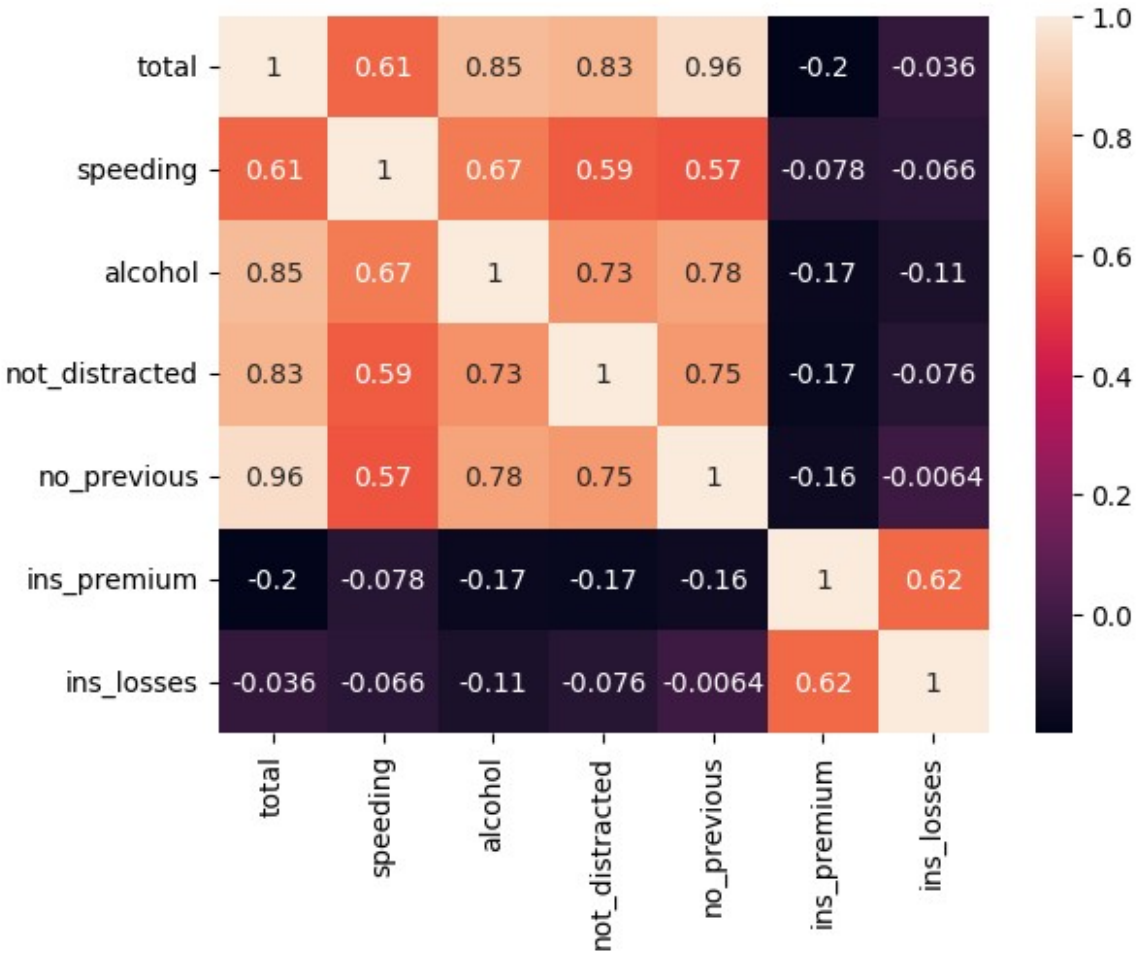



```
corr = df.corr()
```

```
<ipython-input-31-45893e33df67>:1: FutureWarning: The default value of
numeric_only in DataFrame.corr is deprecated. In a future version, it
will default to False. Select only valid columns or specify the value
of numeric_only to silence this warning.
  corr = df.corr()
```

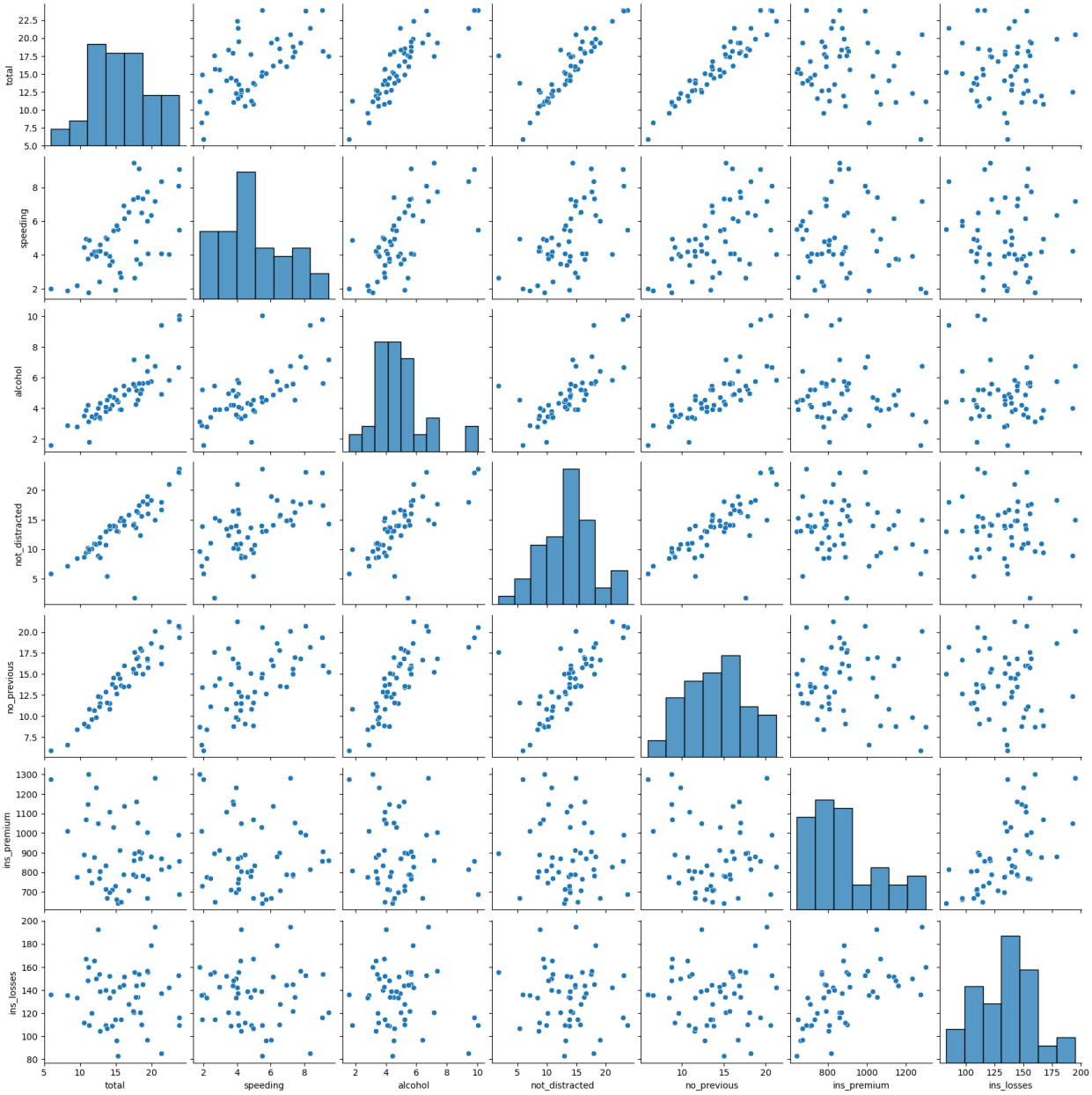
```
sb.heatmap(corr, annot = True)
```

```
<Axes: >
```




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

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


total
speeding
alcohol
not_distracted
no_previous
ins_premium
ins_losses