In [5]:
```
!pip install seaborn
```

```
Requirement already satisfied: seaborn in c:\users\shrividhyaa\anaconda\lib\sit
e-packages (0.11.0)
Requirement already satisfied: matplotlib>=2.2 in c:\users\shrividhyaa\anaconda
\lib\site-packages (from seaborn) (3.3.2)
Requirement already satisfied: scipy>=1.0 in c:\users\shrividhyaa\anaconda\lib
\site-packages (from seaborn) (1.5.2)
Requirement already satisfied: pandas>=0.23 in c:\users\shrividhyaa\anaconda\li
b\site-packages (from seaborn) (1.1.3)
Requirement already satisfied: numpy>=1.15 in c:\users\shrividhyaa\anaconda\lib
\site-packages (from seaborn) (1.19.2)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\shrividhyaa\anacon
da\lib\site-packages (from matplotlib>=2.2->seaborn) (1.3.0)
Requirement already satisfied: cycler>=0.10 in c:\users\shrividhyaa\anaconda\li
b\site-packages (from matplotlib>=2.2->seaborn) (0.10.0)
Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.3 in c:\u
sers\shrividhyaa\anaconda\lib\site-packages (from matplotlib>=2.2->seaborn) (2.
4.7)
Requirement already satisfied: certifi>=2020.06.20 in c:\users\shrividhyaa\anac
onda\lib\site-packages (from matplotlib>=2.2->seaborn) (2020.6.20)
Requirement already satisfied: pillow>=6.2.0 in c:\users\shrividhyaa\anaconda\l
ib\site-packages (from matplotlib>=2.2->seaborn) (8.0.1)
Requirement already satisfied: python-dateutil>=2.1 in c:\users\shrividhyaa\ana
conda\lib\site-packages (from matplotlib>=2.2->seaborn) (2.8.1)
Requirement already satisfied: pytz>=2017.2 in c:\users\shrividhyaa\anaconda\li
b\site-packages (from pandas>=0.23->seaborn) (2020.1)
Requirement already satisfied: six in c:\users\shrividhyaa\anaconda\lib\site-pa
ckages (from cycler>=0.10->matplotlib>=2.2->seaborn) (1.15.0)
```

In [6]:
```
!pip install numpy
```

```
Requirement already satisfied: numpy in c:\users\shrividhyaa\anaconda\lib\site-
packages (1.19.2)
```

In [7]:
```
!pip install pandas
```

```
Requirement already satisfied: pandas in c:\users\shrividhyaa\anaconda\lib\site
-packages (1.1.3)
Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\shrividhyaa\a
naconda\lib\site-packages (from pandas) (2.8.1)
Requirement already satisfied: numpy>=1.15.4 in c:\users\shrividhyaa\anaconda\l
ib\site-packages (from pandas) (1.19.2)
Requirement already satisfied: pytz>=2017.2 in c:\users\shrividhyaa\anaconda\li
b\site-packages (from pandas) (2020.1)
Requirement already satisfied: six>=1.5 in c:\users\shrividhyaa\anaconda\lib\si
te-packages (from python-dateutil>=2.7.3->pandas) (1.15.0)
```

In [8]:
```
!pip install matplotlib
```

```
Requirement already satisfied: matplotlib in c:\users\shrividhyaa\anaconda\lib
\site-packages (3.3.2)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\shrividhyaa\anacon
da\lib\site-packages (from matplotlib) (1.3.0)
Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.3 in c:\u
sers\shrividhyaa\anaconda\lib\site-packages (from matplotlib) (2.4.7)
Requirement already satisfied: pillow>=6.2.0 in c:\users\shrividhyaa\anaconda\l
ib\site-packages (from matplotlib) (8.0.1)
Requirement already satisfied: python-dateutil>=2.1 in c:\users\shrividhyaa\ana
conda\lib\site-packages (from matplotlib) (2.8.1)
Requirement already satisfied: certifi>=2020.06.20 in c:\users\shrividhyaa\anac
onda\lib\site-packages (from matplotlib) (2020.6.20)
Requirement already satisfied: cycler>=0.10 in c:\users\shrividhyaa\anaconda\li
b\site-packages (from matplotlib) (0.10.0)
Requirement already satisfied: numpy>=1.15 in c:\users\shrividhyaa\anaconda\lib
\site-packages (from matplotlib) (1.19.2)
Requirement already satisfied: six>=1.5 in c:\users\shrividhyaa\anaconda\lib\si
te-packages (from python-dateutil>=2.1->matplotlib) (1.15.0)
```

In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
import warnings
warnings.filterwarnings("ignore")
```

In [2]:
```
dataset= pd.read_csv(r'C:\Users\shrividhyaa\Downloads\clevelanda (2).csv')
```

In [3]:
```
dataset
```

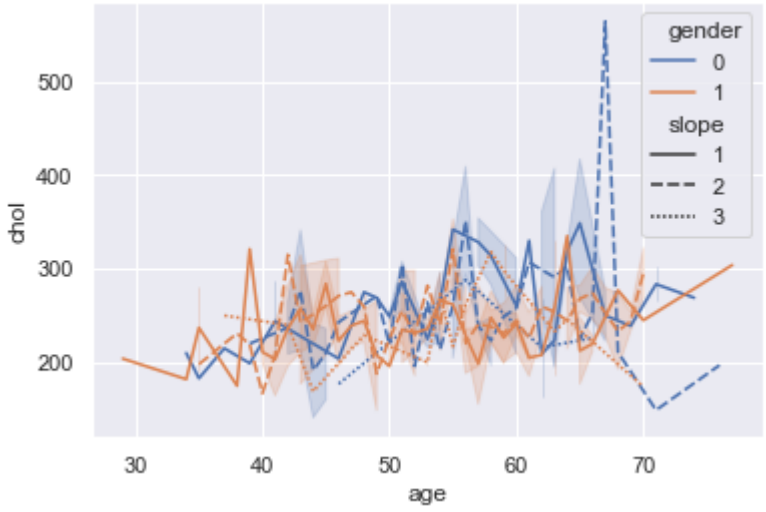
Out[3]:

	age	gender	cp	trestbps	chol	fps	restecg	thalach	exang	oldpeak	slope	ca	thal	clas
0	63	1	1	145	233	1	2	150	0	2.3	3	0	6	
1	67	1	4	160	286	0	2	108	1	1.5	2	3	3	
2	67	1	4	120	229	0	2	129	1	2.6	2	2	7	
3	37	1	3	130	250	0	0	187	0	3.5	3	0	3	
4	41	0	2	130	204	0	2	172	0	1.4	1	0	3	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
298	45	1	1	110	264	0	0	132	0	1.2	2	0	7	
299	68	1	4	144	193	1	0	141	0	3.4	2	2	7	
300	57	1	4	130	131	0	0	115	1	1.2	2	1	7	
301	57	0	2	130	236	0	2	174	0	0.0	2	1	3	
302	38	1	3	138	175	0	0	173	0	0.0	1	?	3	

303 rows × 14 columns

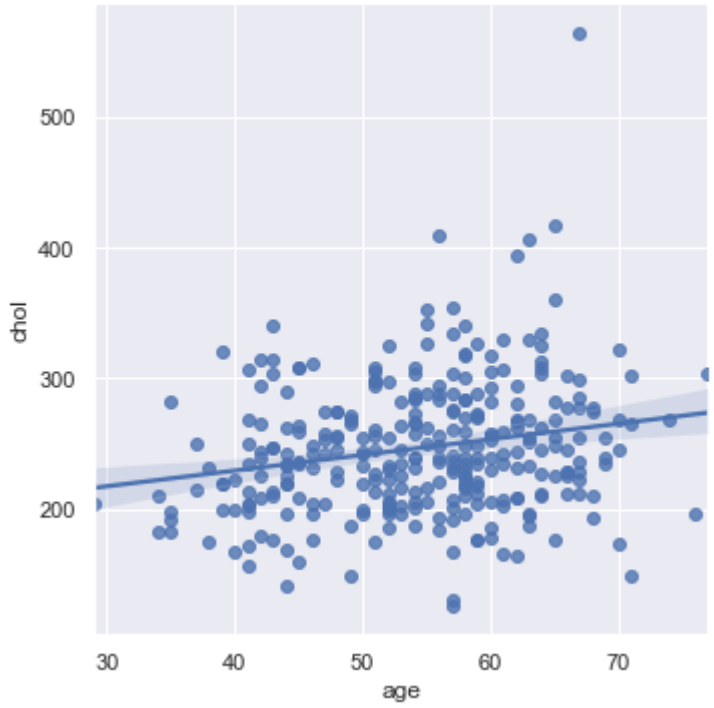
In [44]:
```
#LINEPLOT
sns.set_theme(style="darkgrid")
sns.lineplot(x="age", y="chol",hue="gender", style="slope",data=dataset)
```

Out[44]:
```
<AxesSubplot:xlabel='age', ylabel='chol'>
```



In [45]:
```
#lmplot
sns.lmplot(x='age', y='chol', data= dataset)
```

Out[45]:
```
<seaborn.axisgrid.FacetGrid at 0x2ac65809580>
```

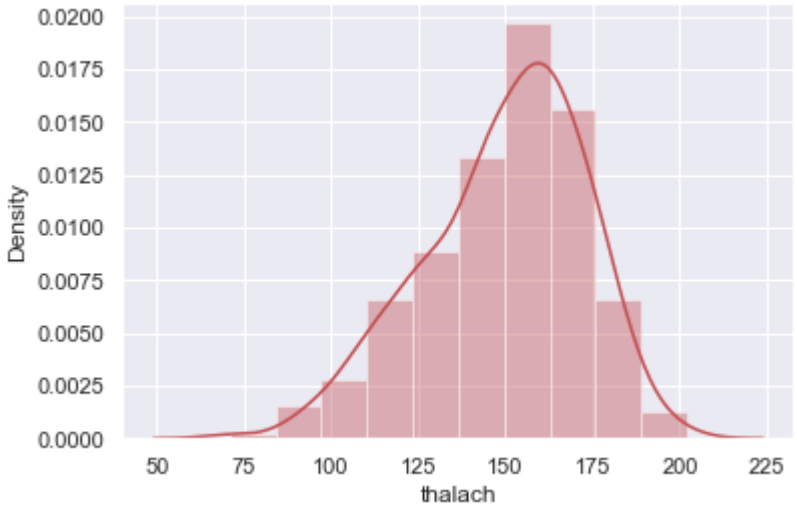


In [46]:
```
#scatterplot
sns.scatterplot(data= dataset, x='age', y= 'chol', hue='slope', palette='Blues')
```

Out[46]: <AxesSubplot:xlabel='age', ylabel='chol'>

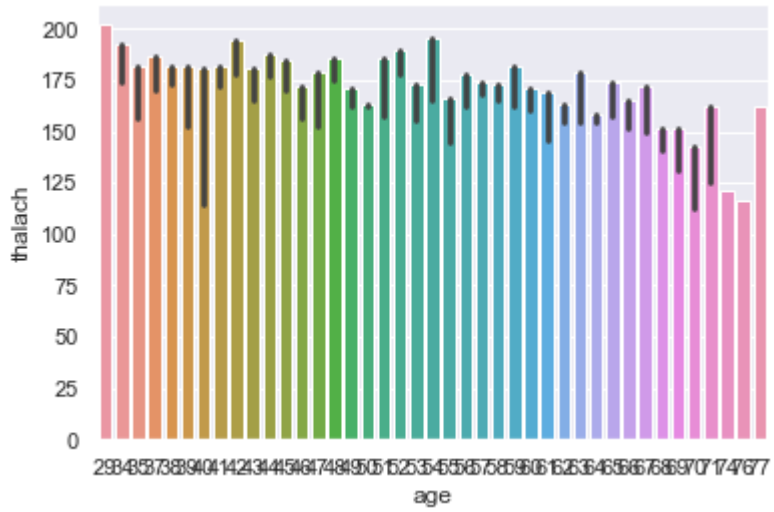
In [49]:
```
#distplot
sns.distplot(dataset['thalach'], kde=True, hist= True, color='r', vertical=False,
```

Out[49]: <AxesSubplot:xlabel='thalach', ylabel='Density'>



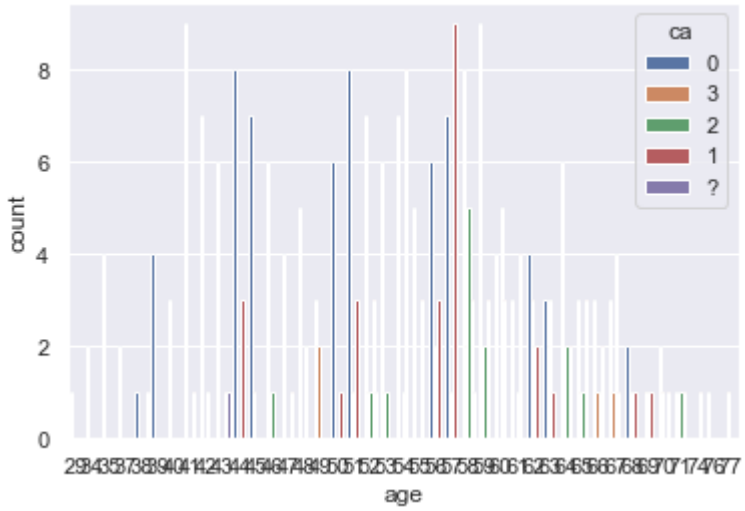
In [50]:
```
#barplot
sns.barplot(data= dataset, x='age', y='thalach', estimator=np.max)
```

Out[50]: <AxesSubplot:xlabel='age', ylabel='thalach'>



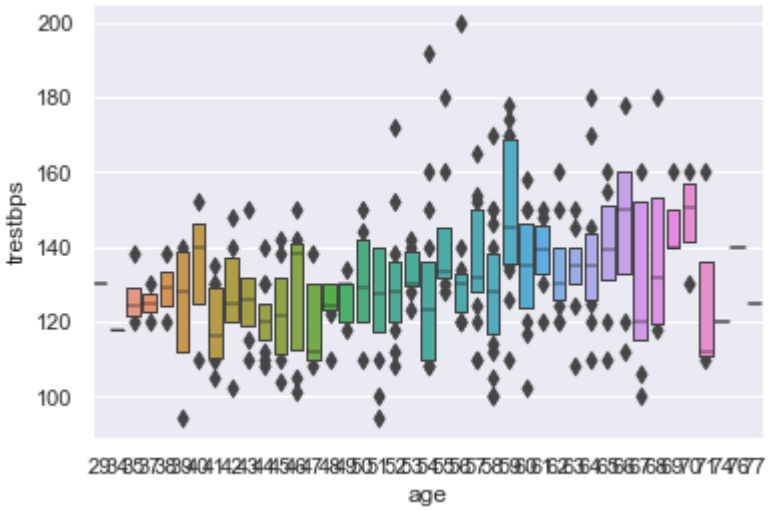
In [52]:
```
#countplot
sns.countplot(data= dataset, x='age', hue='ca')
```

Out[52]: <AxesSubplot:xlabel='age', ylabel='count'>



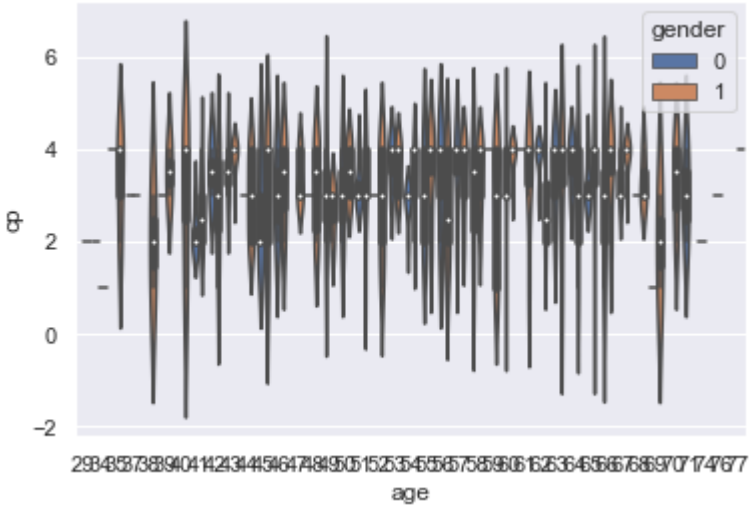
In [53]:
```
#box plot
sns.boxenplot(data= dataset , x='age', y='trestbps')
```

Out[53]: <AxesSubplot:xlabel='age', ylabel='trestbps'>



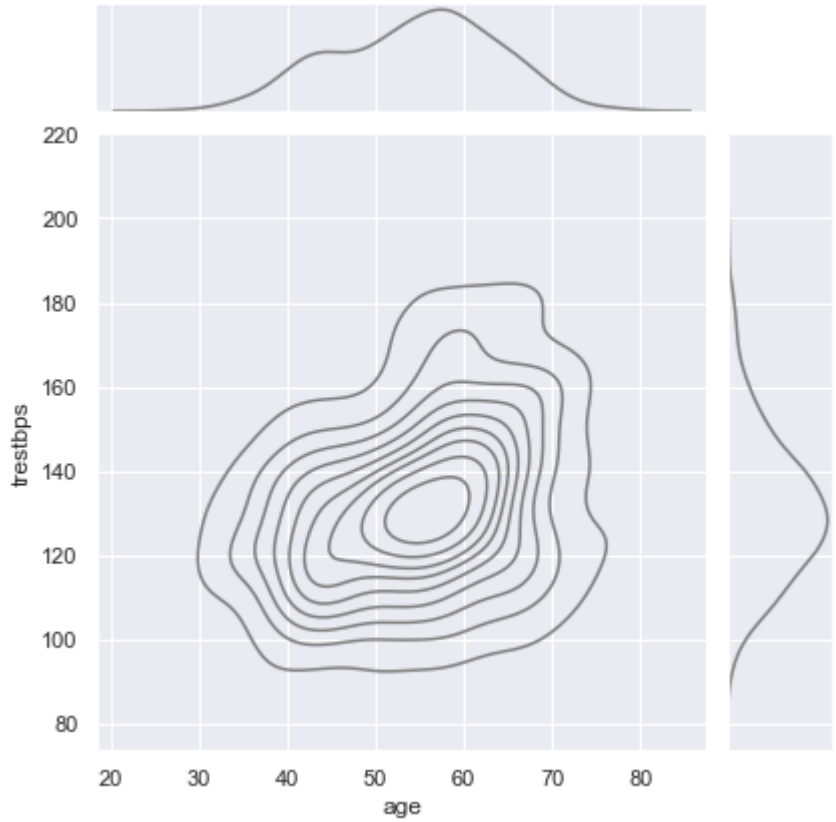
In [54]:
```
#violin plot
sns.violinplot(data= dataset , x='age', y='cp', hue='gender')
```

Out[54]: <AxesSubplot:xlabel='age', ylabel='cp'>



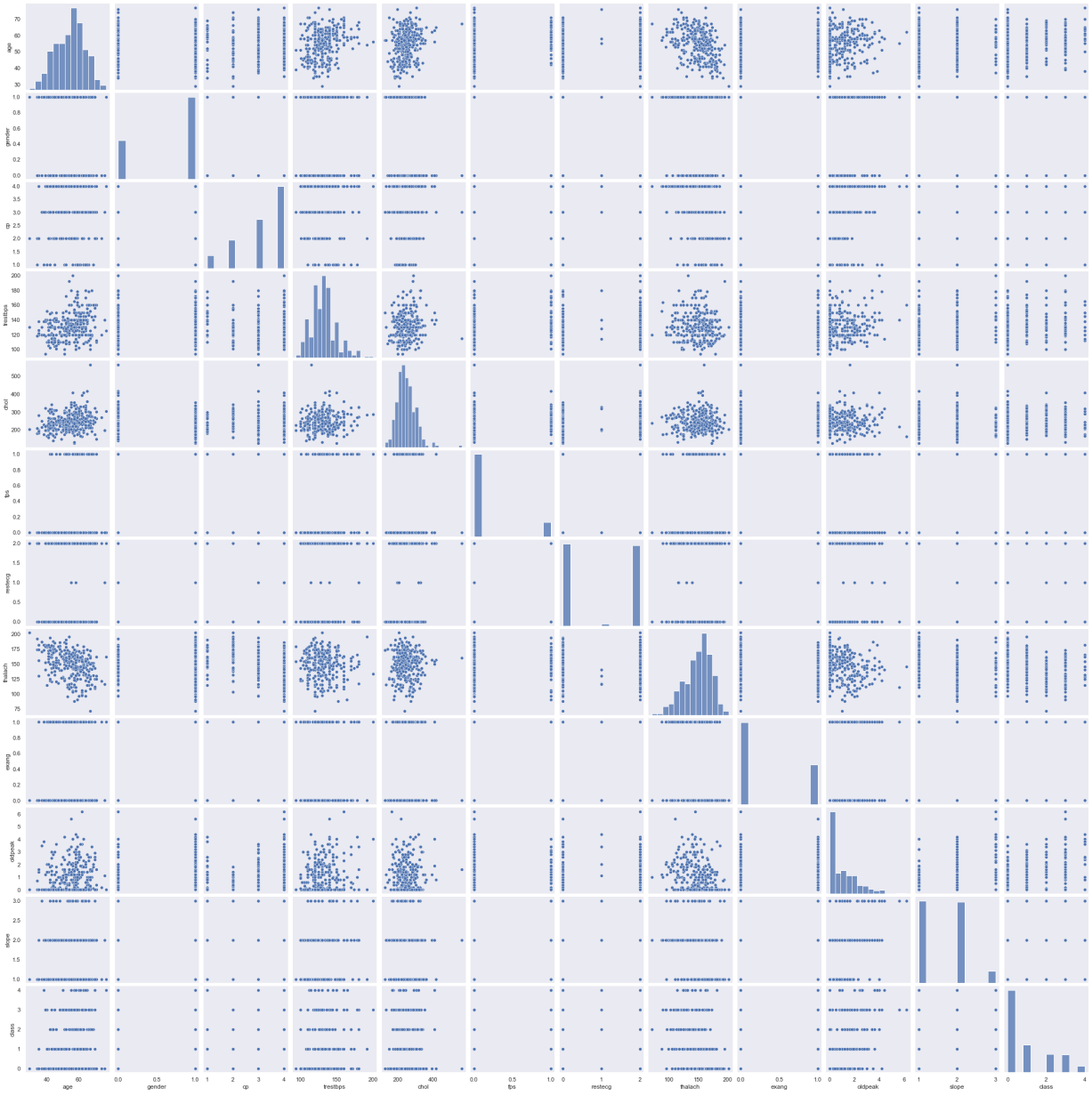
In [55]:
```
#jointplot
sns.jointplot(data=dataset, x='age', y='trestbps', color='gray', kind= 'kde')
```

Out[55]:
```
<seaborn.axisgrid.JointGrid at 0x2ac68745370>
```



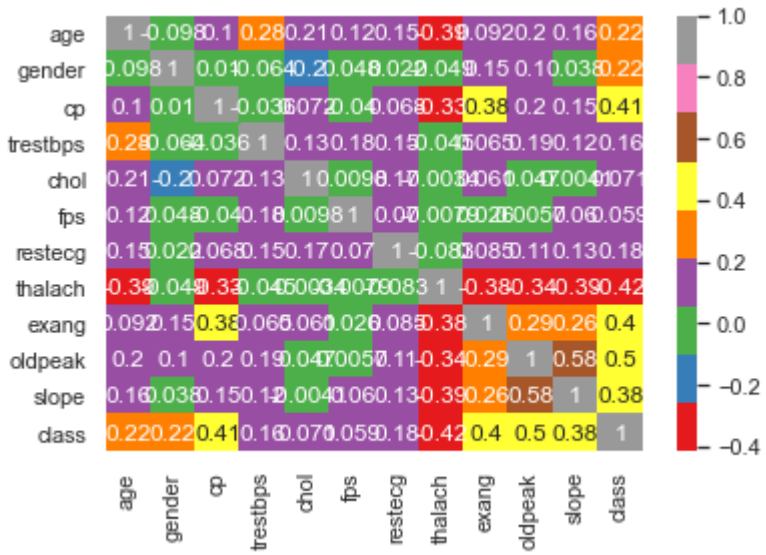
In [15]:
```
#pairplot
sns.set_style("dark")
sns.pairplot(dataset)
```

Out[15]: <seaborn.axisgrid.PairGrid at 0x2ac3f71aca0>



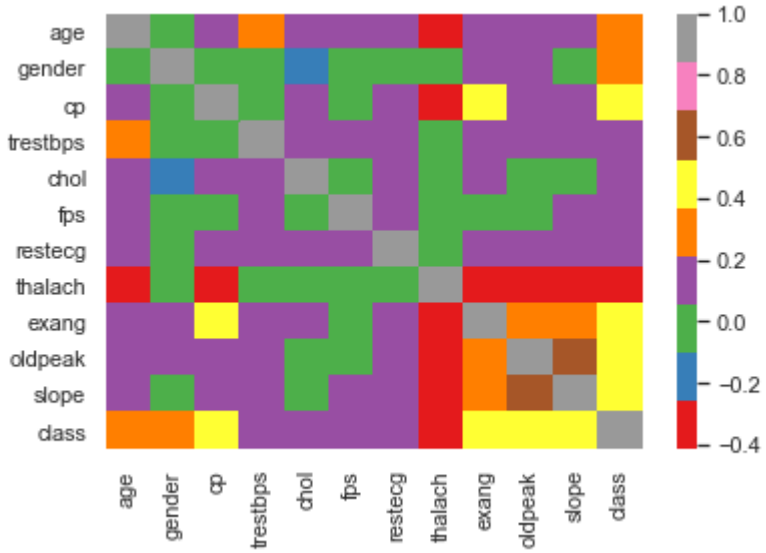
In [57]:
```
#heatmap
sns.heatmap(data=dataset.corr(), annot=True, cmap='Set1')
```

Out[57]: <AxesSubplot:>



In [58]:
```
#heatmap
sns.heatmap(data=dataset.corr(), annot=False, cmap='Set1')
```

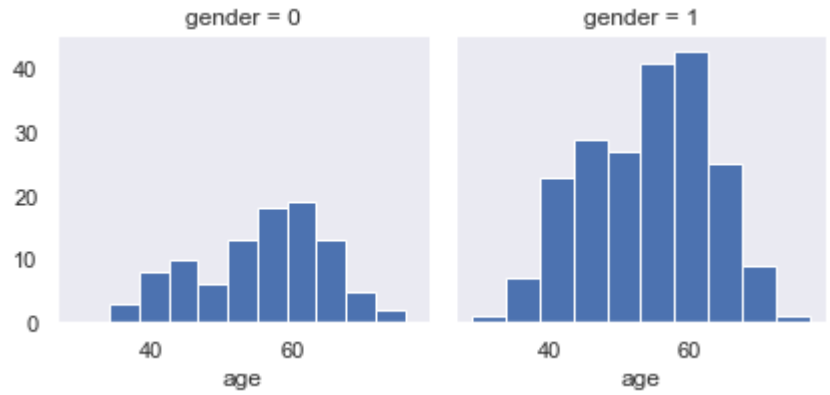
Out[58]: <AxesSubplot:>



In [19]:
```
#facetgrid
plt.figure(figsize=(50,100))
b = sns.FacetGrid(dataset,col='gender')
b.map(plt.hist, 'age')
```

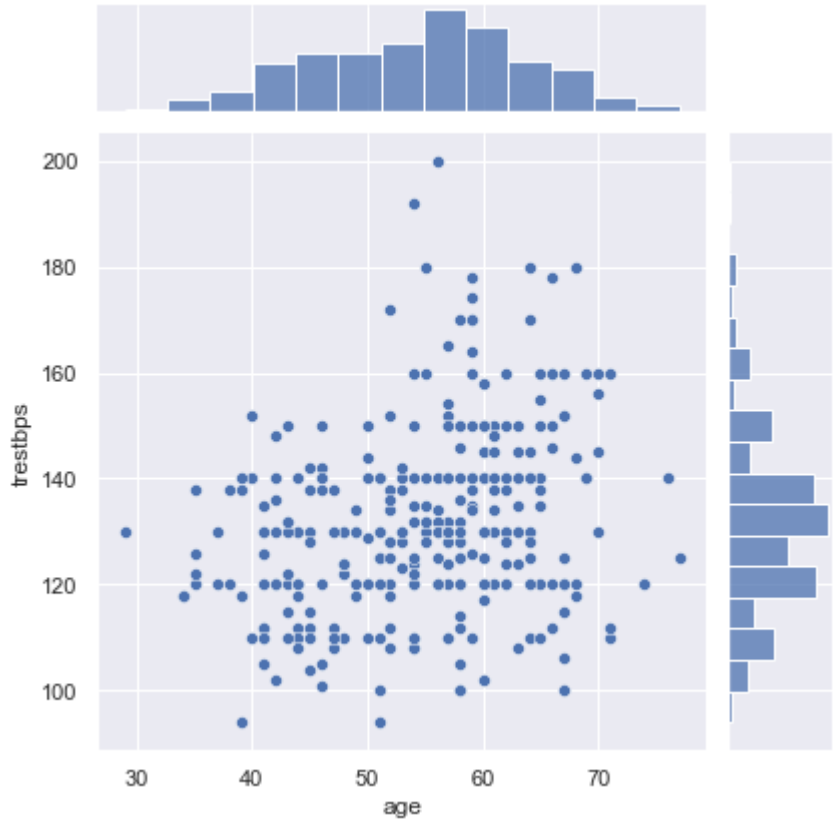
Out[19]:
```
<seaborn.axisgrid.FacetGrid at 0x2ac4aba8dc0>

<Figure size 3600x7200 with 0 Axes>
```



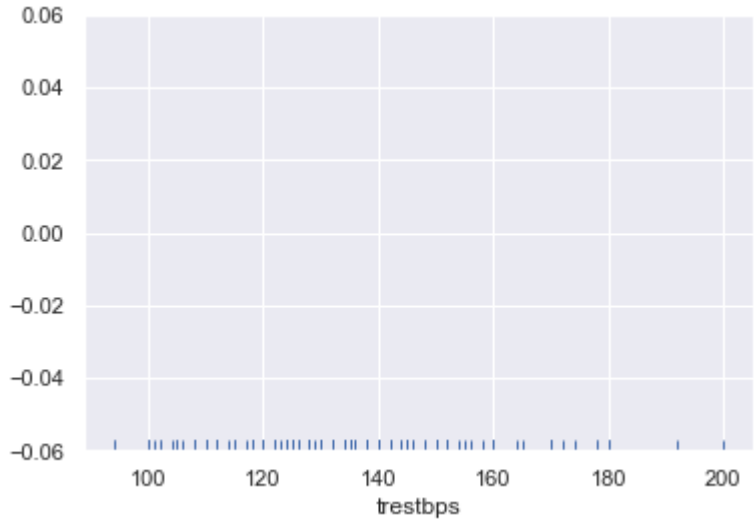
In [59]:
```
#jointplot
sns.jointplot(x='age', y='trestbps', data=dataset)
```

Out[59]:
```
<seaborn.axisgrid.JointGrid at 0x2ac68d66e20>
```



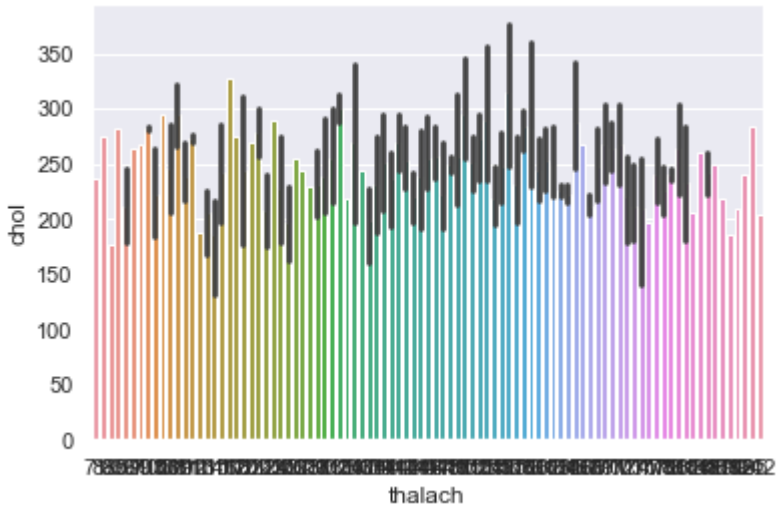
In [62]:
```
#rugplot
sns.rugplot(dataset['trestbps'])
```

Out[62]: <AxesSubplot:xlabel='trestbps'>



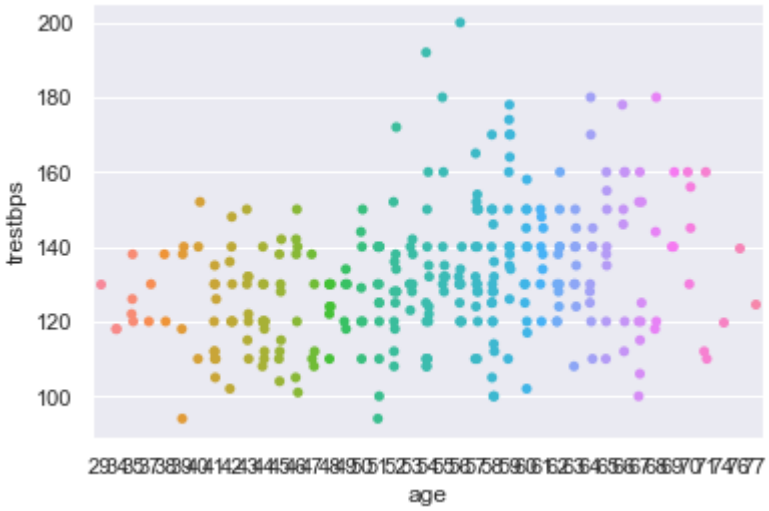
In [63]:
```
#barplot
sns.barplot(x='thalach', y='chol', data=dataset)
```

Out[63]: <AxesSubplot:xlabel='thalach', ylabel='chol'>



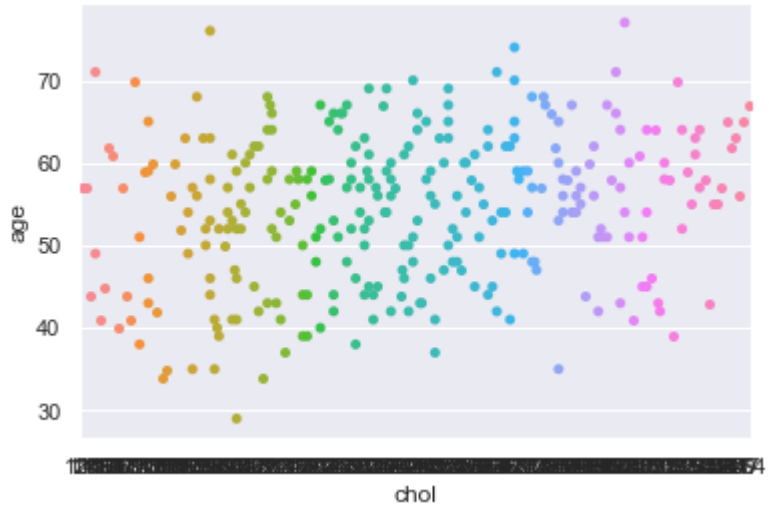
In [64]:
```
#stripplot
sns.stripplot(x='age', y='trestbps', data=dataset,jitter=True)
```

Out[64]: <AxesSubplot:xlabel='age', ylabel='trestbps'>



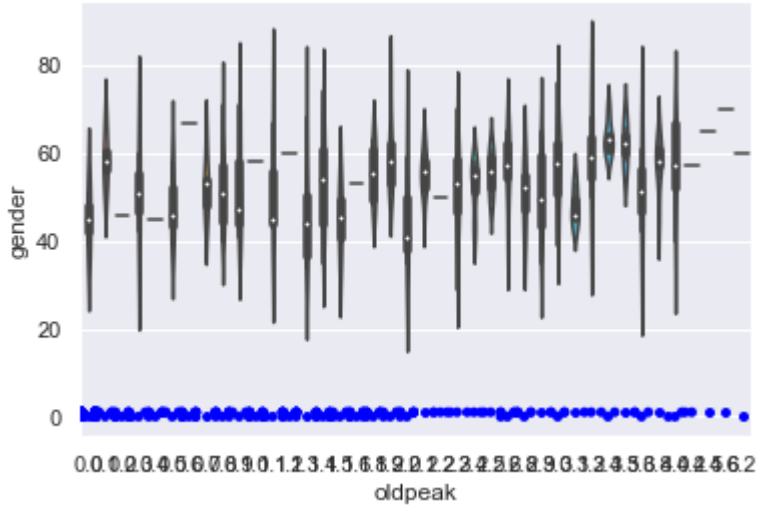
In [65]:
```
#swarmplot
sns.swarmplot(x='chol', y='age', data=dataset)
```

Out[65]: <AxesSubplot:xlabel='chol', ylabel='age'>



In [67]:
```
#Combining Swarm and Violin Plots
sns.violinplot(x='trestbps', y='age', data=dataset)
sns.swarmplot(x='oldpeak', y='gender', data=dataset, color='blue')
```

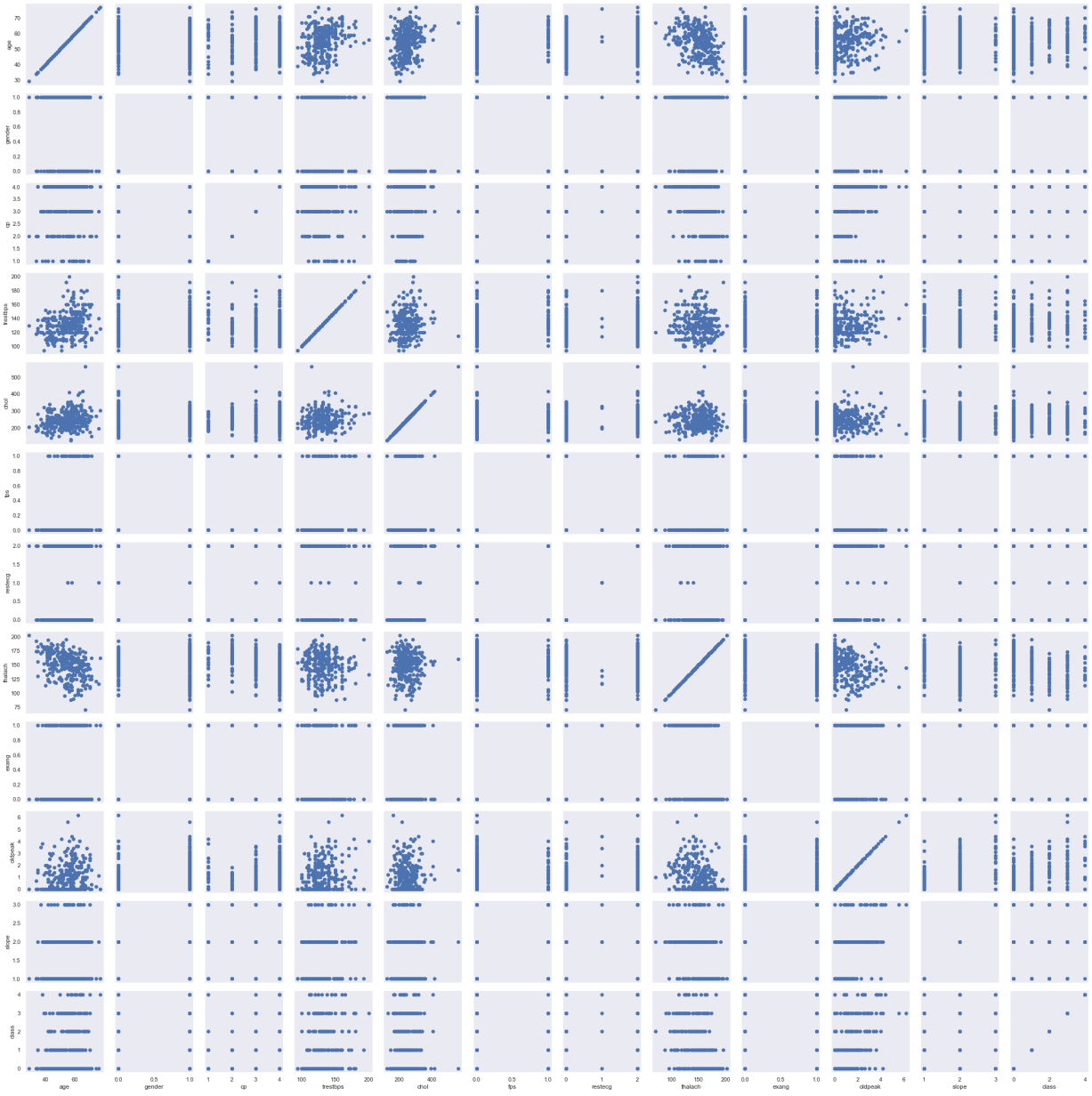
Out[67]: <AxesSubplot:xlabel='oldpeak', ylabel='gender'>



In [ ]:

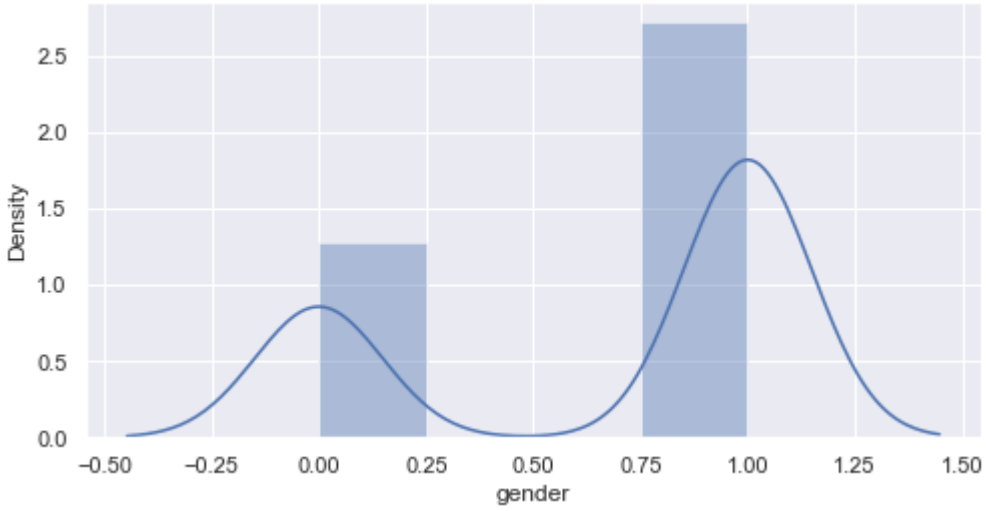
In [39]:
```
#grid
grids = sns.PairGrid(dataset)
grids.map(plt.scatter)
```

Out[39]: <seaborn.axisgrid.PairGrid at 0x2ac5dc9c580>



In [72]:
```
#displot
plt.figure(figsize=(8,4))
sns.distplot(dataset['gender'])
```

Out[72]: <AxesSubplot:xlabel='gender', ylabel='Density'>



In [ ]: