In [1]:

```python
# there are three main distribution plots
#Rug Plot
#Histogram
#KDE Plot
```

In [3]:

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

In [4]:

```python
df= pd.read_csv("dm_office_sales.csv")
```

In [5]:

```python
df
```

Out[5]:

	division	level of education	training level	work experience	salary	sales
0	printers	some college	2	6	91684	372302
1	printers	associate's degree	2	10	119679	495660
2	peripherals	high school	0	9	82045	320453
3	office supplies	associate's degree	2	5	92949	377148
4	office supplies	high school	1	5	71280	312802
...	...	...	...	...	...	...
995	computer hardware	associate's degree	1	1	70083	177953
996	computer software	associate's degree	1	0	68648	103703
997	peripherals	associate's degree	2	8	108354	450011
998	peripherals	associate's degree	2	3	79035	330354
999	computer hardware	some college	0	9	108444	364436

1000 rows × 6 columns

In [6]:

```
df.head()
```

Out[6]:

	division	level of education	training level	work experience	salary	sales
0	printers	some college	2	6	91684	372302
1	printers	associate's degree	2	10	119679	495660
2	peripherals	high school	0	9	82045	320453
3	office supplies	associate's degree	2	5	92949	377148
4	office supplies	high school	1	5	71280	312802

rugplot

In [8]:

```
sns.rugplot(x="salary",data=df,height=0.5)
```

Out[8]:

```
<AxesSubplot:xlabel='salary'>
```
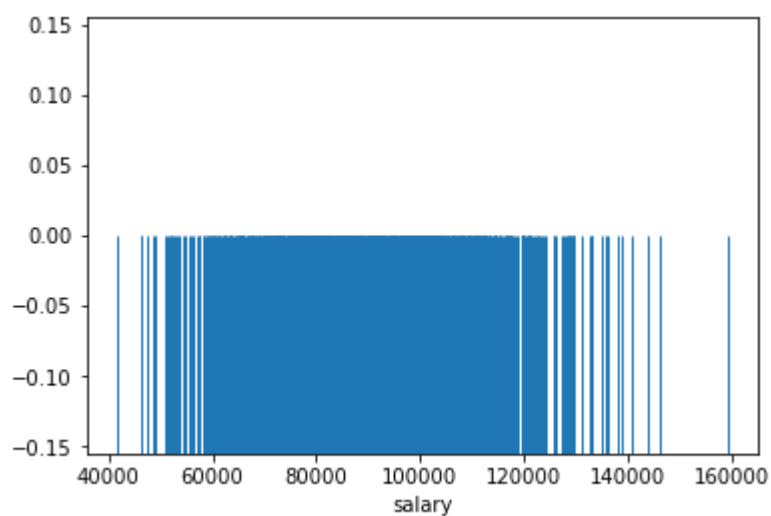

displot

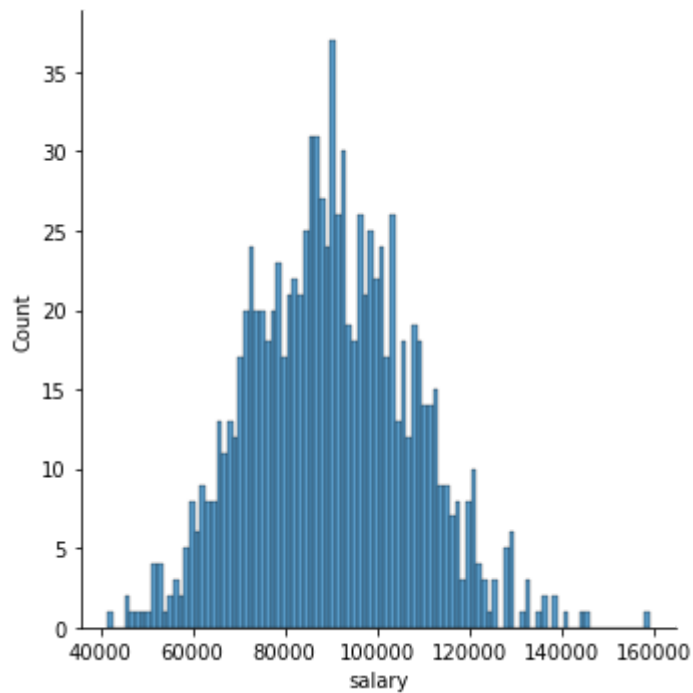In [12]:

```python
# distplot is deprecated use displot
sns.displot(x="salary",data=df,bins=100)
```

Out[12]:

```
<seaborn.axisgrid.FacetGrid at 0x2ac44d65070>
```
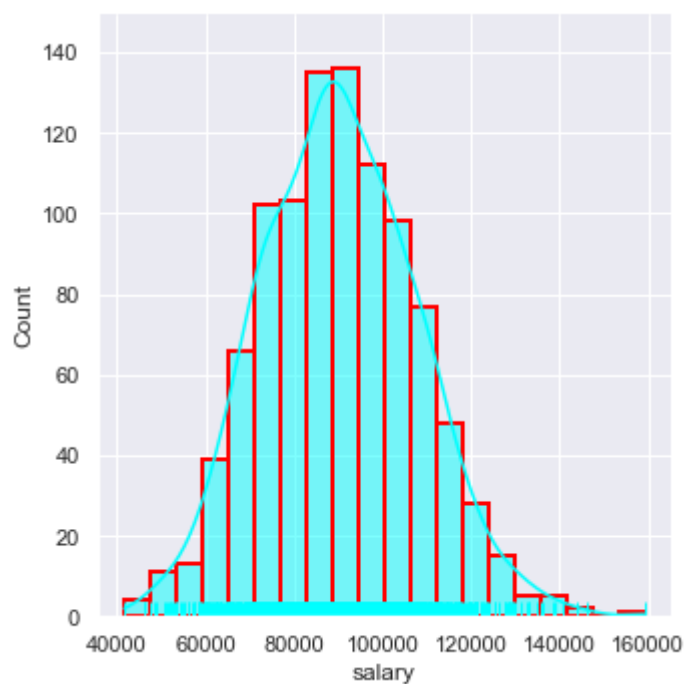
In [28]:

```python
# all style color used in matplotlib are available
# here like marker etc
sns.set(style="darkgrid") #style=ticks
sns.displot(x="salary",data=df,bins=20,color="cyan",
            edgecolor="red",linewidth=2,kde=True,rug=True)
```
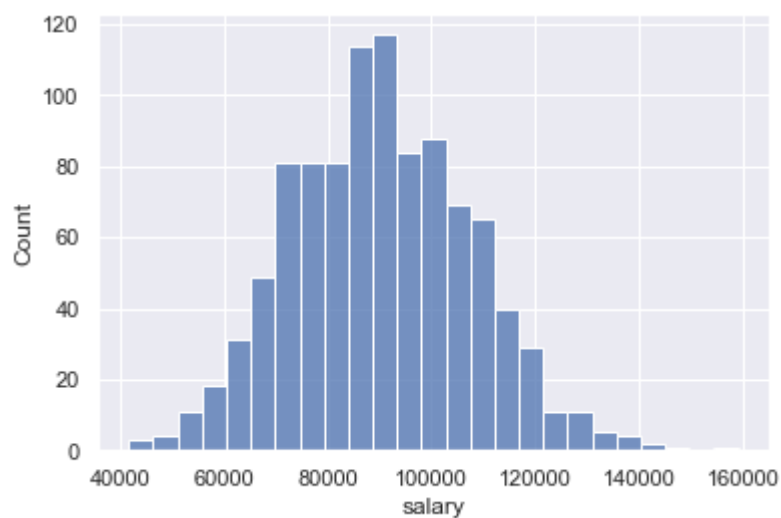
Out[28]:

```
<seaborn.axisgrid.FacetGrid at 0x2ac4753f760>
```


histplot

In [26]:

```python
sns.histplot(x="salary",data=df)
```

Out[26]:

```
<AxesSubplot:xlabel='salary', ylabel='Count'>
```
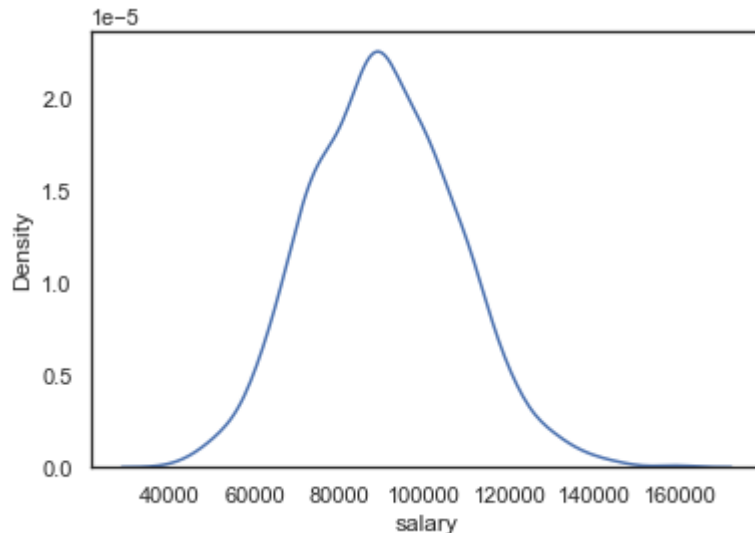

kdeplot

In [33]:

```python
#plt.figure(figsize=(100,50),dpi=20)
sns.set(style="white")
sns.kdeplot(data=df,x="salary")
```

Out[33]:

```
<AxesSubplot:xlabel='salary', ylabel='Density'>
```


In [36]:

```python
np.random.seed(42)
sample=np.random.randint(0,100,200)
```

In [37]:

```python
sample
```

Out[37]:

```
array([51, 92, 14, 71, 60, 20, 82, 86, 74, 74, 87, 99, 23,  2, 21, 52,  1,
       87, 29, 37,  1, 63, 59, 20, 32, 75, 57, 21, 88, 48, 90, 58, 41, 91,
       59, 79, 14, 61, 61, 46, 61, 50, 54, 63,  2, 50,  6, 20, 72, 38, 17,
        3, 88, 59, 13,  8, 89, 52,  1, 83, 91, 59, 70, 43,  7, 46, 34, 77,
       80, 35, 49,  3,  1,  5, 53,  3, 53, 92, 62, 17, 89, 43, 33, 73, 61,
       99, 13, 94, 47, 14, 71, 77, 86, 61, 39, 84, 79, 81, 52, 23, 25, 88,
       59, 40, 28, 14, 44, 64, 88, 70,  8, 87,  0,  7, 87, 62, 10, 80,  7,
       34, 34, 32,  4, 40, 27,  6, 72, 71, 11, 33, 32, 47, 22, 61, 87, 36,
       98, 43, 85, 90, 34, 64, 98, 46, 77,  2,  0,  4, 89, 13, 26,  8, 78,
       14, 89, 41, 76, 50, 62, 95, 51, 95,  3, 93, 22, 14, 42, 28, 35, 12,
       31, 70, 58, 85, 27, 65, 41, 44, 61, 56,  5, 27, 27, 43, 83, 29, 61,
       74, 91, 88, 61, 96,  0, 26, 61, 76,  2, 69, 71, 26])
```

In [39]:

```python
sample=pd.DataFrame(sample,columns=["age"])
```

In [42]:

```
sample
```

Out[42]:

	age
0	51
1	92
2	14
3	71
4	60
...	...
195	76
196	2
197	69
198	71
199	26

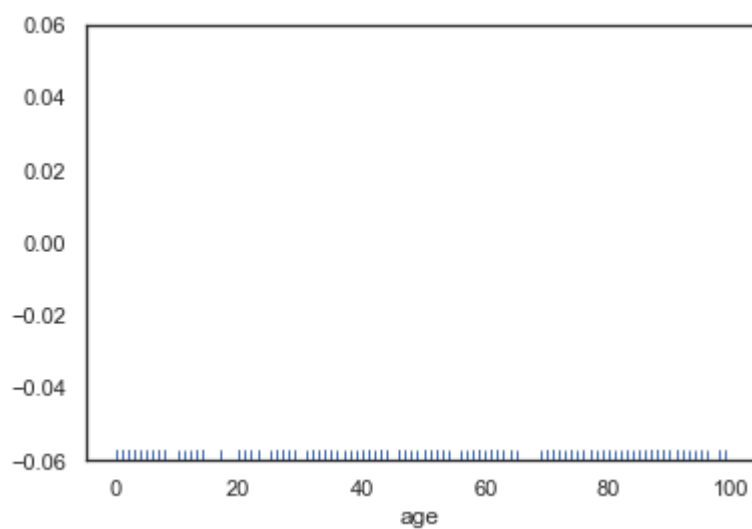200 rows × 1 columns

In [41]:

```
sns.rugplot(data=sample,x="age")
```

Out[41]:

```
<AxesSubplot:xlabel='age'>
```

In [48]:

```python
sns.displot(x="age",data=sample,rug=True,bins=30,kde=True)
```
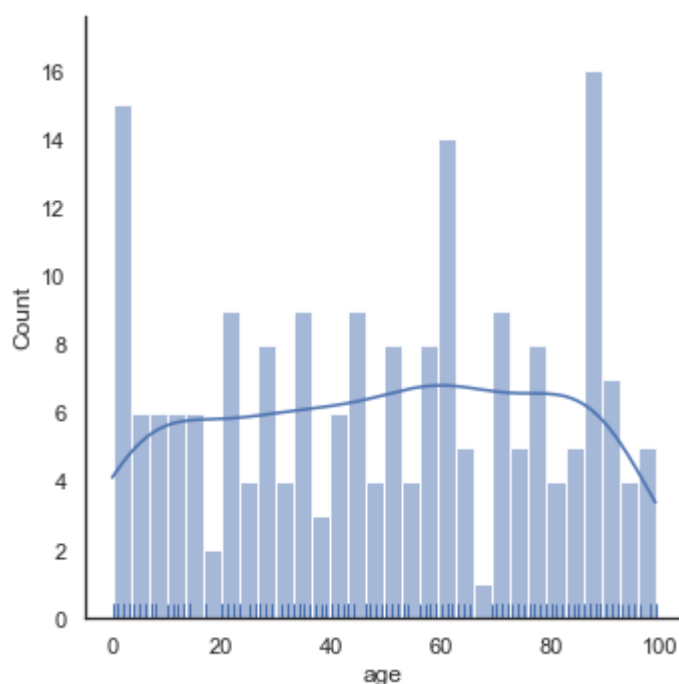
Out[48]:

```
<seaborn.axisgrid.FacetGrid at 0x2ac48027070>
```


In [51]:

```python
sns.kdeplot(x="age",data=sample,color="red",clip=[0,100])
```
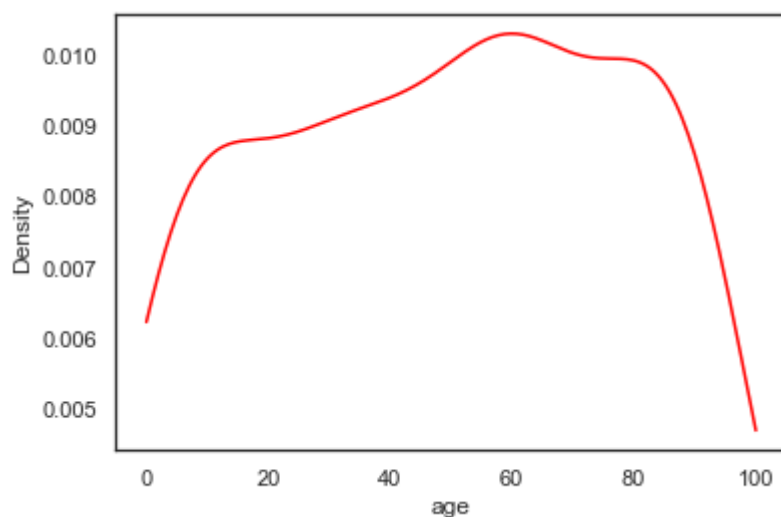
Out[51]:

```
<AxesSubplot:xlabel='age', ylabel='Density'>
```

In [56]:

```python
sns.kdeplot(x="age",data=sample,color="red",clip=[0,100],bw_adjust=0.6,shade=True)
```
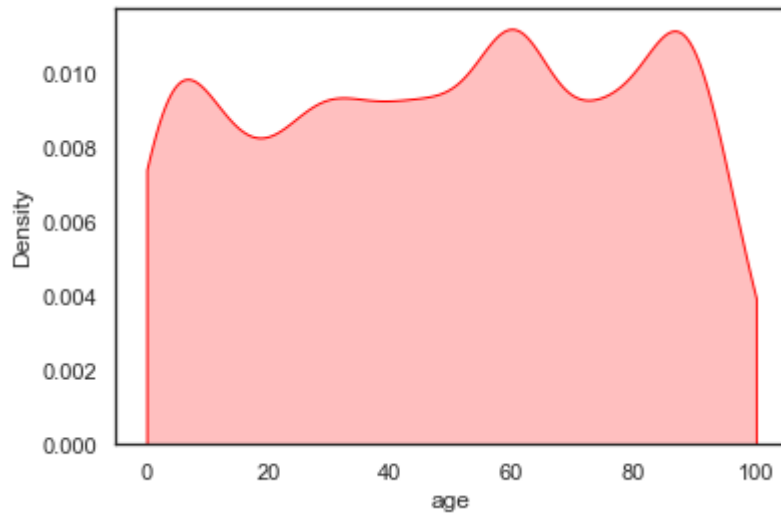
Out[56]:

```
<AxesSubplot:xlabel='age', ylabel='Density'>
```


In [ ]: