stats

October 19, 2022

[ ]:
```
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

[ ]:
```

```

[ ]:
```
a = np.linspace(0, 10, 10)
```

[ ]:
```
b = np.zeros((10,10))
```

[ ]:
```
c = np.linspace(0,100,100)
```

[ ]:
```
len(c)
```

[ ]:
```
100
```

[ ]:
```
c.reshape((10,10))
```

[ ]:
```
array([[  0.        ,   1.01010101,   2.02020202,   3.03030303,
          4.04040404,   5.05050505,   6.06060606,   7.07070707,
          8.08080808,   9.09090909],
       [ 10.1010101 ,  11.11111111,  12.12121212,  13.13131313,
         14.14141414,  15.15151515,  16.16161616,  17.17171717,
         18.18181818,  19.19191919],
       [ 20.2020202 ,  21.21212121,  22.22222222,  23.23232323,
         24.24242424,  25.25252525,  26.26262626,  27.27272727,
         28.28282828,  29.29292929],
       [ 30.3030303 ,  31.31313131,  32.32323232,  33.33333333,
         34.34343434,  35.35353535,  36.36363636,  37.37373737,
         38.38383838,  39.39393939],
       [ 40.4040404 ,  41.41414141,  42.42424242,  43.43434343,
         44.44444444,  45.45454545,  46.46464646,  47.47474747,
         48.48484848,  49.49494949],
       [ 50.50505051,  51.51515152,  52.52525253,  53.53535354,
         54.54545455,  55.55555556,  56.56565657,  57.57575758,
         58.58585859,  59.5959596 ],
       [ 60.60606061,  61.61616162,  62.62626263,  63.63636364,
```

```
  64.64646465,  65.65656566,  66.66666667,  67.67676768,
  68.68686869,  69.6969697 ],
[ 70.70707071,  71.71717172,  72.72727273,  73.73737374,
  74.74747475,  75.75757576,  76.76767677,  77.77777778,
  78.78787879,  79.7979798 ],
[ 80.80808081,  81.81818182,  82.82828283,  83.83838384,
  84.84848485,  85.85858586,  86.86868687,  87.87878788,
  88.88888889,  89.8989899 ],
[ 90.90909091,  91.91919192,  92.92929293,  93.93939394,
  94.94949495,  95.95959596,  96.96969697,  97.97979798,
  98.98989899, 100.        ]])
```

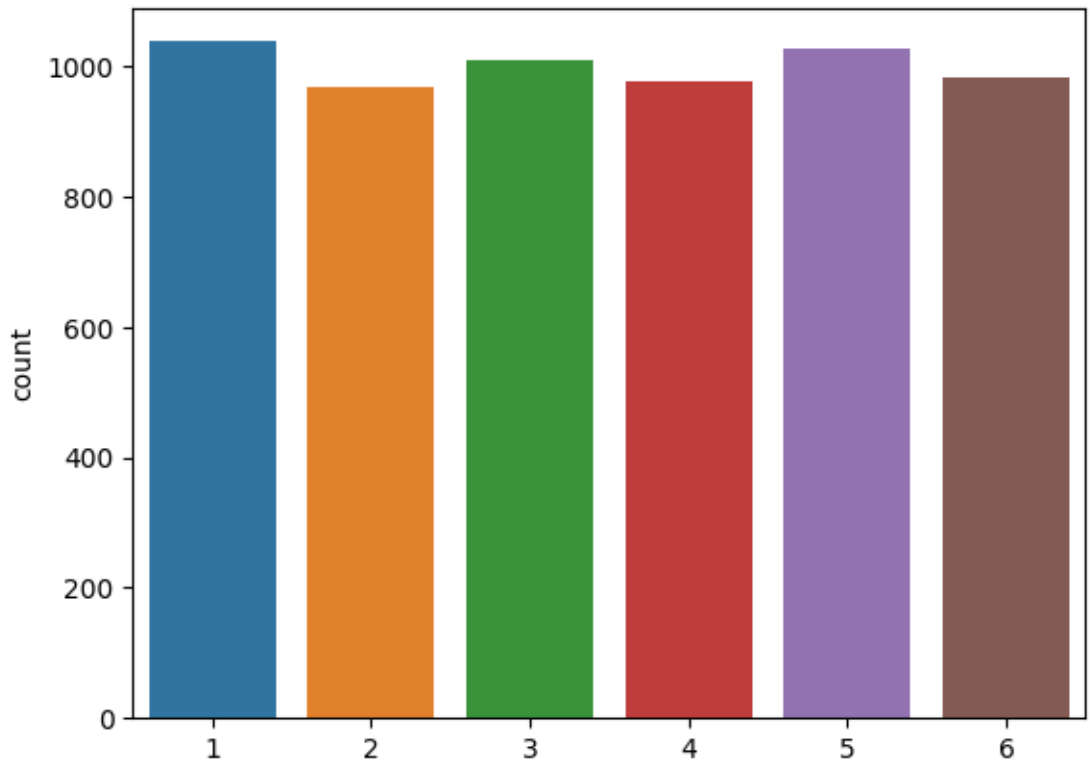
[ ]:
```
np.array([np.arange(0,10), np.arange(10,20)])
```

[ ]:
```
array([[ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9],
       [10, 11, 12, 13, 14, 15, 16, 17, 18, 19]])
```

[ ]:
```
d = np.random.randint(1, 7, 6000)
```

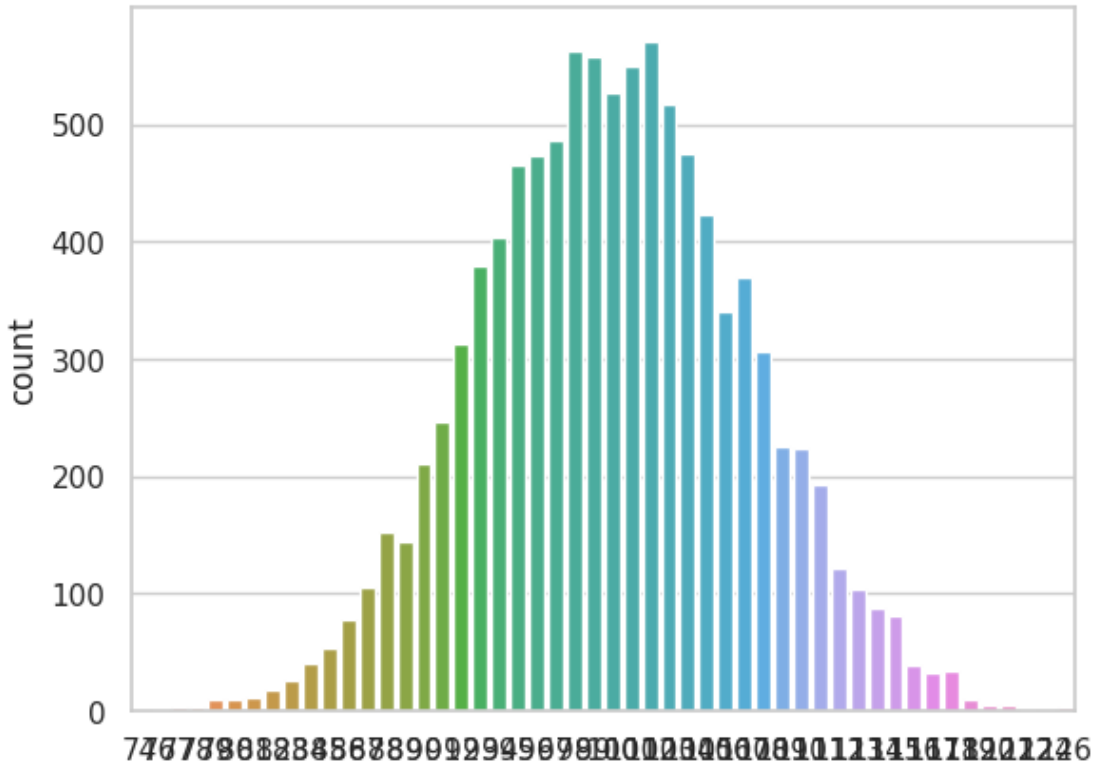
[ ]:
```

```

[ ]:
```
sns.countplot(x=d);
```



[ ]:
```
data = np.random.binomial(200, 0.5, 10000)
```

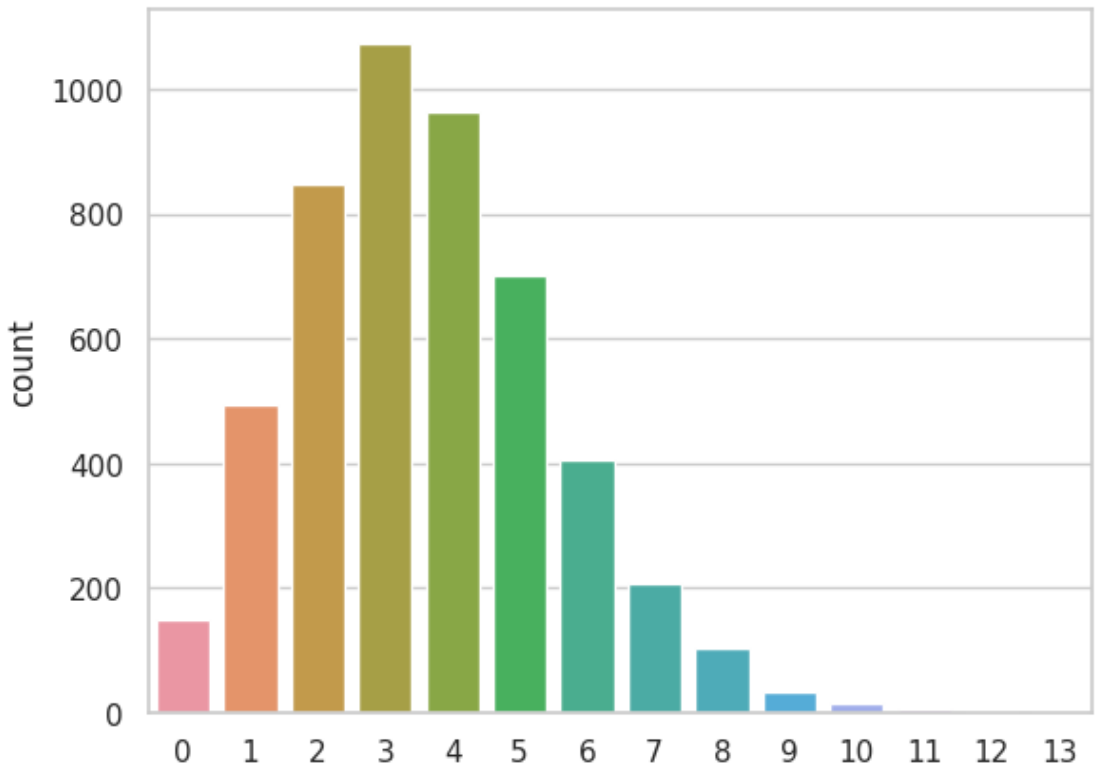
[ ]:
```
sns.set_theme(style='whitegrid')
sns.countplot(x=data);
```



0.1 poisson distribution

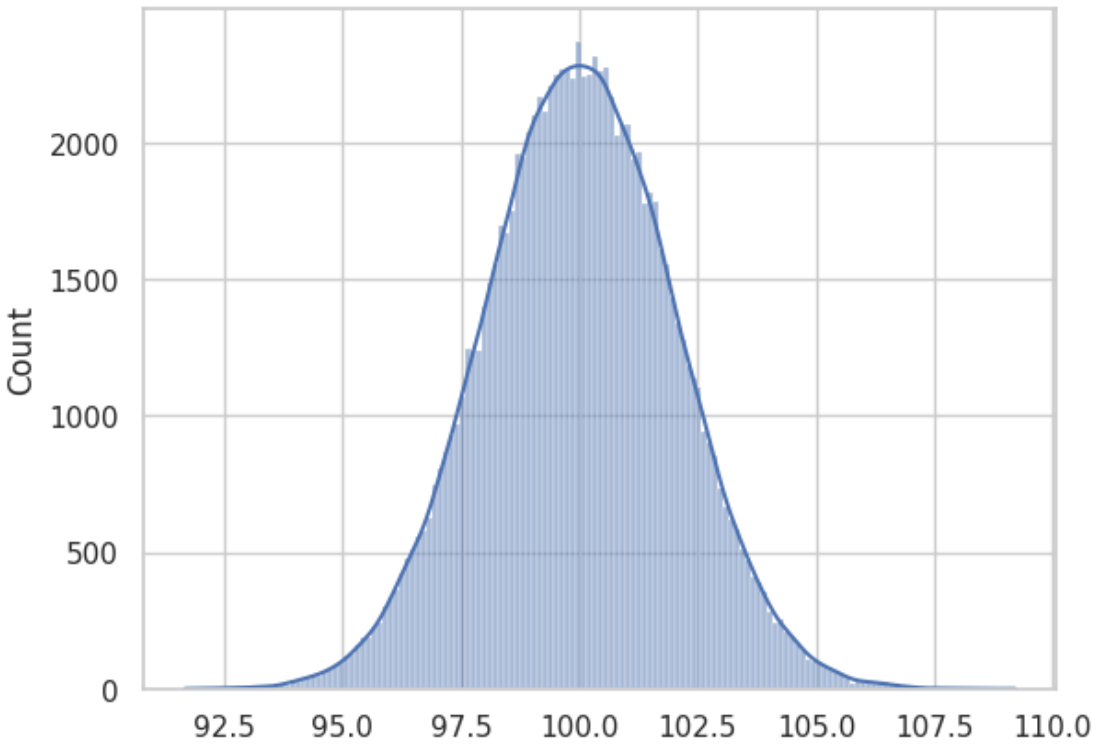
[ ]:
```
q = np.random.poisson(3.6, 5000)
```

[ ]:
```
sns.countplot(x=q);
```



0.2 Normal distribution

[ ]:
```
norm = np.random.normal(100, 2, 100000)
sns.histplot(x=norm, kde=True);
```



[ ]:
```
sum((norm>99) & (norm<101))
```

[ ]: 38121

[ ]:
```
sum(norm<101)
```

[ ]: 69054