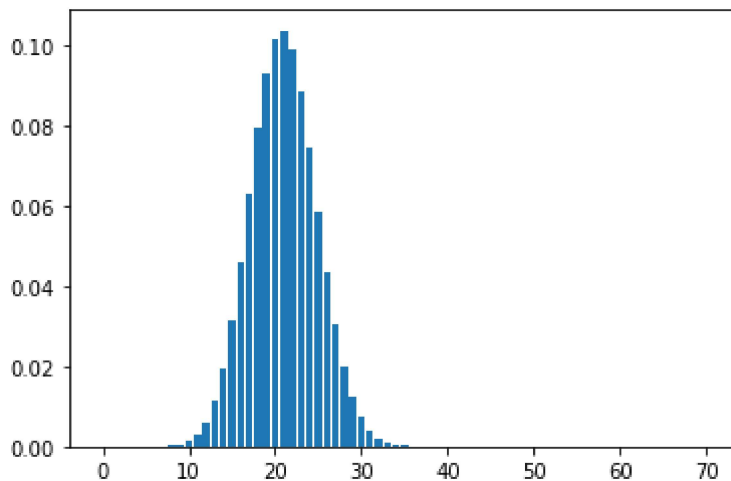


SUMESH R - 20104169

```
In [1]: import numpy as np
import pandas as pd
from scipy.stats import binom
import matplotlib.pyplot as plt
```

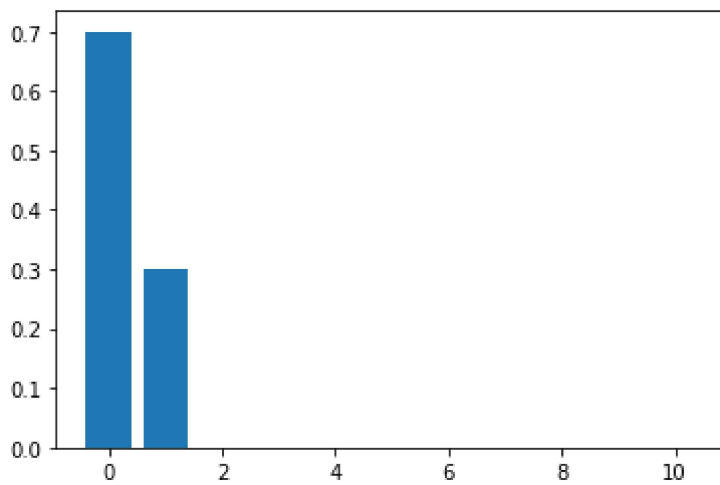
Binomial

```
In [2]: n=70
p=0.3
r=list(range(n+1))
d=[binom.pmf(i,n,p) for i in r]
plt.bar(r,d)
plt.show()
```



Bernoulli

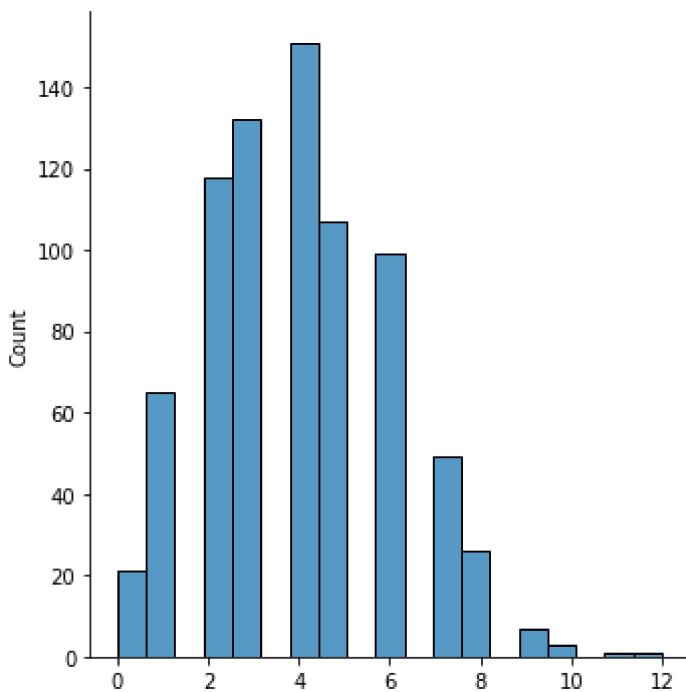
```
In [3]: from scipy.stats import bernoulli
b=bernoulli(0.3)
x=[0,1,2,3,4,5,6,7,8,9,10]
plt.bar(x,b.pmf(x))
plt.show()
```



Possion

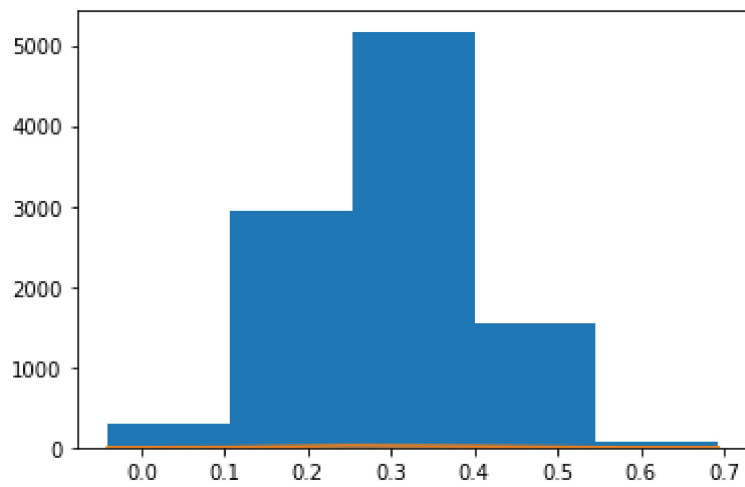
```
In [4]: from numpy import random
import seaborn as sns
sns.displot(random.poisson(lam=4,size=780))
```

Out[4]: <seaborn.axisgrid.FacetGrid at 0x14ccaaffdf0>



Normal

```
In [5]: mu,si=0.3,0.1
s=np.random.normal(mu,si,10000)
counts,bins,ignored=plt.hist(s,5)
plt.plot(bins,1/si*np.sqrt(2*np.pi)*np.exp(-(bins-mu)**2/(2*si**2)))
plt.show()
```



Exponential

```
In [6]: exp=np.random.exponential(1,4568)
count,bins,ignored=plt.hist(exp,3)
plt.show()
```

