

```

def
get_pdf_probability(dataset,startrange,endrange):
from matplotlib import pyplot
from scipy.stats import norm
import seaborn as sns
ax =
sns.distplot(dataset,kde=True,kde_kws
={'color':'blue'},color='Green')
pyplot.axvline(startrange,color='Red'
)
pyplot.axvline(endrange,color='Red')
# generate a sample
sample = dataset
# calculate parameters
sample_mean =sample.mean()
sample_std = sample.std()
print('Mean=%.3f, Standard
Deviation=%.3f' % (sample_mean,
sample_std))
# define the distribution
dist = norm(sample_mean, sample_std)

```



```

values = [value for value in
range(startrange, endrange)]
#probabilities = [dist.pdf(value) for value
in values]
probabilities = []
for value in values:
probabilities.append(dist.pdf(value))
prob=sum(probabilities)
print("The area between
range({},{}) : {} ".format(startrange,endrange
, sum(probabilities)))
return prob

```



## Step-by-step meaning (in very simple words)

### 1 Draws a distribution graph

- Uses seaborn to plot the dataset's histogram + KDE curve.
- Draws two red vertical lines at:
  - starrange
  - endrange



This shows visually where the range lies.

## 2 Calculates mean and standard deviation

python

```
sample_mean = sample.mean()  
sample_std.std()
```

This finds:

- Average value of the dataset
- Spread (std deviation) of the dataset

**3**

## Creates a normal distribution

python

```
dist = norm(sample_std)
```

This assumes:

- “The dataset behaves like a
- normal (bell curve) distribution.

#### 4 Computes PDF values inside the range

python

```
probabilities = []
for value in values:
    probabilities.append(dist.pdf(value))
```

For every integer between `startrange` and `endrange`, it calculates:

## 5 Returns the total PDF sum between the range

python

```
prob = sum(probabilities)  
return prob
```



This is **not** the true probability but an **approximation** using PDF values.