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Zipf Distribution

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Zipf distributions are used to sample data based on zipf's law.

Zipf's Law: In a collection the nth common term is $1/n$ times of the most common term. E.g. 5th common word in english has occurs nearly $1/5$ th times as of the most used word.

It has two parameters:

a - distribution parameter.

size - The shape of the returned array.

Example

Draw out a sample for zipf distribution with distribution parameter 2 with size 2x3:

```
from numpy import random  
  
x = random.zipf(a=2, size=(2, 3))  
  
print(x)
```

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Visualization of Zipf Distribution

Sample 1000 points but plotting only ones with value < 10 for more meaningful chart.

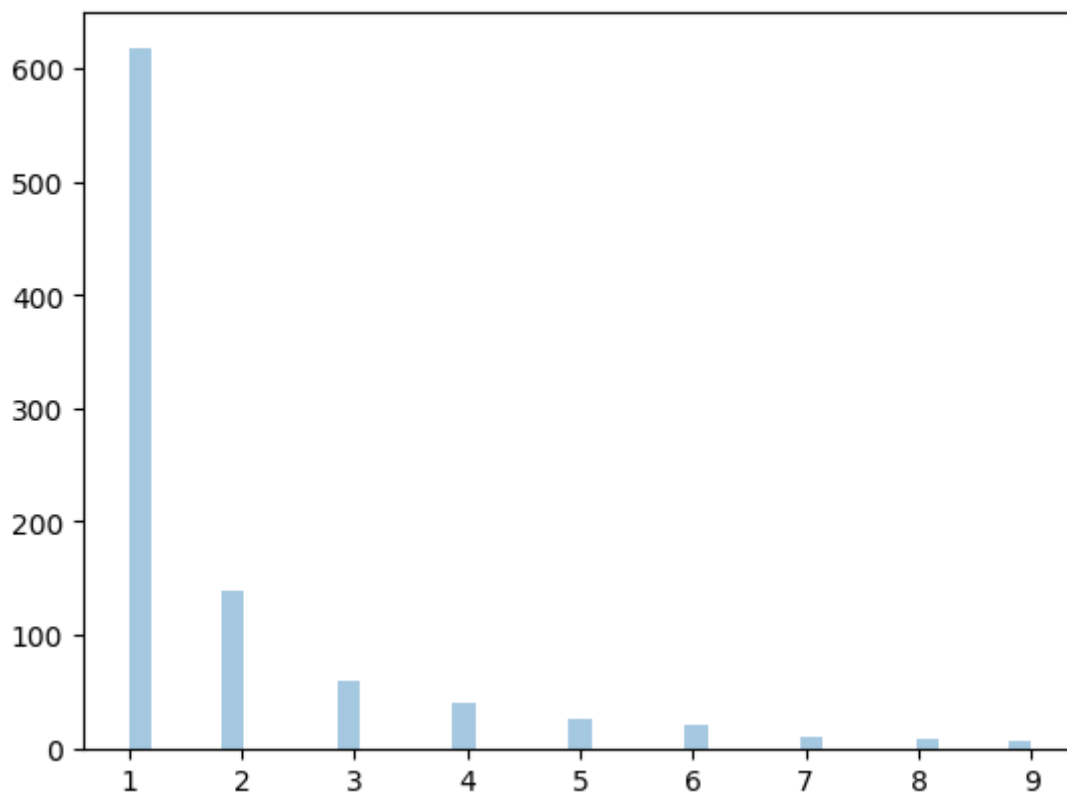
Example

```
from numpy import random
import matplotlib.pyplot as plt
import seaborn as sns

x = random.zipf(a=2, size=1000)
sns.distplot(x[x<10], kde=False)

plt.show()
```

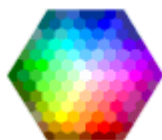
Result



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