Exponential Distribution

Exponential Distribution

Exponential distribution is used for describing time till next event e.g. failure/success etc.

It has two parameters:

`scale` - inverse of rate (see lam in poisson distribution) defaults to 1.0.

`size` - The shape of the returned array.

Example

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Draw out a sample for exponential distribution with 2.0 scale with 2x3 size:

```python
from numpy import random

x = random.exponential(scale=2, size=(2, 3))

print(x)
```
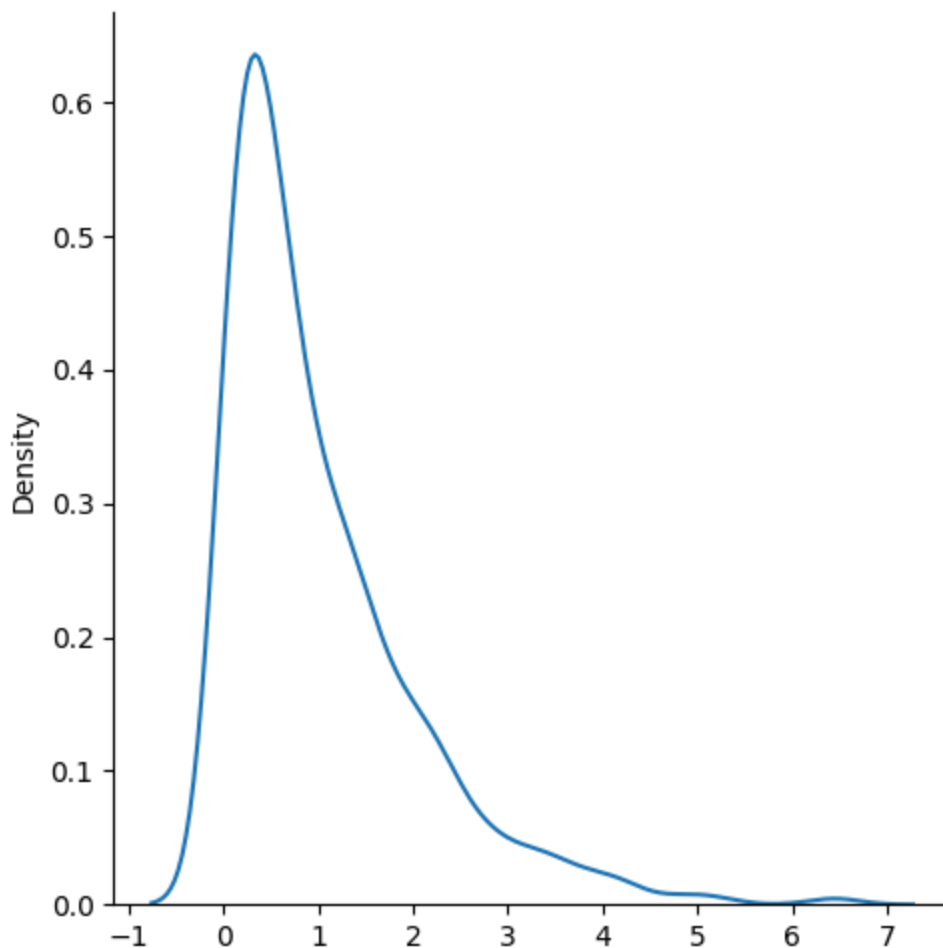
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Example

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

sns.displot(random.exponential(size=1000), kind="kde")

plt.show()
```

Result

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Distribution

Poisson distribution deals with number of occurences of an event in a time period whereas exponential distribution deals with the time between these events.

Exercise [?]

The `random.exponential()` method has two parameters, which ones?

○   `n and size`

○   `loc and size`

○   `scale and size`

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