

Distribución exponencial

Curso de Estadística Descriptiva

7/2/2019

En Python

```
from scipy.stats import expon
import numpy as np
import matplotlib.pyplot as plt

fig, ax = plt.subplots(1,1)

lam = 3
rv = expon(scale = 1/lam)

mean, var, skew, kurt = rv.stats(moments = 'mvsk')
print("Media %f"%mean)

## Media 0.333333

print("Varianza %f"%var)

## Varianza 0.111111

print("Sesgo %f"%skew)

## Sesgo 2.000000

print("Curtosis %f"%kurt)

## Curtosis 6.000000

x = np.linspace(0, 3, 1000)
ax.plot(x, rv.pdf(x), 'r-', lw = 5, alpha = 0.6, label = "Exp(10)")

r = rv.rvs(size = 100000)
ax.hist(r, density = True, histtype = 'stepfilled', alpha = 0.2)

## (array([1.84431751e+00, 6.26924256e-01, 2.16550960e-01, 7.11772198e-02,
##         2.39027977e-02, 8.72242442e-03, 2.40425801e-03, 1.03439008e-03,
##         3.91390840e-04, 2.23651908e-04]), array([5.10982088e-06, 3.57703824e-01, 7.15402538e-01, 1.07
##         1.43079997e+00, 1.78849868e+00, 2.14619739e+00, 2.50389611e+00,
##         2.86159482e+00, 3.21929354e+00, 3.57699225e+00]), [matplotlib.patches.Polygon object at 0x00
```

```
ax.legend(loc = "best", frameon= False)  
plt.show()
```

