

Perform Kolmogorov–Smirnov (KS) Test in Python and R

The KS Test is used to test the equality of distributions. See the [wikipedia](https://en.wikipedia.org/wiki/Kolmogorov-Smirnov_test) for more information.

1. Python: https://docs.scipy.org/doc/scipy/reference/generated/scipy.stats.ks_2samp.html
2. R: <https://stat.ethz.ch/R-manual/R-devel/library/stats/html/ks.test.html>

In the example below, the actual numbers used are a bit non-sensical. However, the purpose is to show the equivalence between the R and Python Functions.

Python

```
import numpy as np
from scipy import stats

x = np.linspace(-15, 15, 9)
y = np.linspace(10, 20, 10)

stats.ks_2samp(x, y)
> Ks_2sampResult(statistic=0.7777777777777778, pvalue=0.0037021801727682435)
```

R

```
x = seq(-15, 15, length.out=9)
y = seq(10, 20, length.out=10)
ks.test(x, y)

>Two-sample Kolmogorov-Smirnov test

data:  x and y
D = 0.77778, p-value = 0.003702
alternative hypothesis: two-sided
```