

Kolmogorov-Smirnov Test

This program implements Kolmogorov-Smirnov Test that is described in „Symulacje stochastyczne i teoria Monte Carlo” – Lorek&Rolski script at subsection 4.2

Required libraries: *numpy*, *scipy.stats*, *argparse*, *pickle*, *pandas*, *glob*

1. INPUT

This program takes three parameters – non of them is required and has default values:

- *input-file* (default: *generated_numbers.pkl*) – path/name of pickle file that we are testing; if *input-dir* is not default it is ignored
- *input-dir* (default: *'*) - path/name of directory with pickle files that we are testing
- *pval-file* (default: *‘p-values.csv’*) – path/name of file where program returns counted p-values

2. OUTPUT

Every file return one p-value.

If *input-file* is not ignored program saves counted p-value in *pval-file* and also prints result on the screen.

If *input-dir* is entered all counted p-values are saved in *pval-file* (one in the row). *pval-file* has n (n – number of files in directory) rows.

3. EXAMPLES

tests file named *‘numbers.pkl’* – if exists:

```
python z4_KS_test.py --input-file numbers.pkl
```

tests all files in directory named *res* – if exists, results saves in *p.csv* file:

```
python z4_KS_test.py --input-dir res --pval-file p.csv
```