

Tests Randomness Of Codes

Choose random generator:
Sound random generator

Choose test name:
Frequency Test (Chi-Squared)

Number of Samples:
500
((generator_name ~time_sec_in_my_computer/amount_samples) (javathread ~18s/100), (import_random ~3s/10,000), (sound ~9s/100) (time ~16s/1000))

Upper Bound for generator:
999999
(time_generator max_upper_bound is 999999) (sound_generator max_upper_bound is 10^18) (java_thread max_upper_bound is 2147483647 (int))

Run Test Stop test

Status: Done
Result: 0s=4709, 1s=4732, p=0.8129, PASS
(Test finished)

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Tests Randomness Of Codes

Choose random generator:
Time Nano random code

Choose test type:
Maurer's Universal Test (L=7)

Upper Bound for generator (sample size):
999999999 Run Test

100% done for python Generator-Generate_random_number_by_time_nano_digits
=== result ===
Maurer's Universal Test: fn=6.049, expected=6.196 z=-2.34, p=0.0194, PASS (L=7, Groups=790)

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CHOOSE A RANDOM CODE AND TEST

Java threads random code :Random codes

Autocorrelation Test (lag=2) Tests

999999999 :Upper Bound

run test

done for Java Generator 100%
=== result ===
Autocorrelation (lag=2): r=0.042, z=2.13, p=0.0333, PASS



Tests Randomness Of Codes

Choose random generator:
(import random) generator

Choose test name:
Frequency Test (Chi-Squared)

Number of Samples:
1000
((generator_name ~time_sec_in_my_computer/amount_samples) (jathread ~18s/100), (import_random ~3s/10,000), (sound ~9s/100) (time ~16s/1000))

Upper Bound for generator:
999999
(time_generator max_upper_bound is 999999) (sound_generator max_upper_bound is 10^18) (java_thread max_upper_bound is 2147483647 (int))

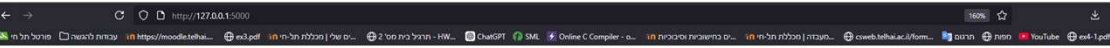
Run Test

Stop test

Status: Done
Result: 0s=9097, 1s=9893, p=0.0000, FAIL
(Test finished)

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ניתן לראות בתמונה שאלגוריתם מהספרייה
import random
לא עבר את המבחן המודד רנדומליות



Direct execution of a random generator

Upper Bound: 2147483647
(time_generator max_upper_bound is 999999) (sound_generator max_upper_bound is 10^18) (java_thread max_upper_bound is 2147483647 (int))

Generate Random Number (Java threads)

Generate Random Number (Time Nano)

Generate Random Number (Sound code)

Generate Random Number (import random)

== OUTPUT ==

Java Generator 2080708080

MOVE TO TESTS PAGE



File Edit Search Source Run Debug Consoles Projects Tools View Help

untitled40.py x app.py - Project x generators.py x direct.html x

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <title>Direct Random Generator
6 </head>
7 <body>
8 <h2>Direct execution of a rand
9 <!-- Main form for direct rand
10 <form method="post">
11 <!-- Upper bound for rand
12 <label for="upper_bound">U
13 <input type="number" name=
14 <!-- Display of valid uppe
15 <small>
16 (time_generator max_up
17 (sound_generator max_u
18 (java_thread max_upper
19 </small>
20

21 <!-- Each button triggers
22 <button type="submit" name
23 <button type="submit" name
24 <button type="submit" name
25 <button type="submit" name
26 </form>
27
28 <!-- Output area: shows the re
29 {% if output %}
30 <hr>
31 <h3>=== OUTPUT ===</h3>
32 <div style="margin-top:24px; f
33 {{ output }}
34 </div>
35 {% endif %}
36

Variable explorer

Help Plots Find Profiler Code Analysis

Console 47/A

random_number: 643881
random_number: 783701
random_number: 950339
random_number: 96103
random_number: 251713
random_number: 406255
random_number: 553496
random_number: 689188
random_number: 856214
random_number: 995948
random_number: 165283
random_number: 316863
random_number: 477748
random_number: 635439
random_number: 788592
random_number: 918086
random_number: 52984
random_number: 212953
random_number: 367234
random_number: 517392
random_number: 653292
random_number: 808732
random_number: 981082
random_number: 131624
random_number: 266098
random_number: 407445
random_number: 552517
random_number: 700329
random_number: 856254
random_number: 5155
random_number: 159787
random_number: 302916
random_number: 439961
random_number: 574212
random_number: 719275
random_number: 878960
random_number: 23478
random_number: 175143
random_number: 325783
random_number: 468344
random_number: 605038
random_number: 751031
random_number: 912362
random_number: 51127
random_number: 196087
Total bits collected from time : 188525

IPython console History

conda (Python 3.8.8) Line 34, Col 11 UTF-8 CRLF RW Mem 85%

http://127.0.0.1:5000/tests? 160%
פורטל תל חי עבודות להגשה https://moodle.telhai... ex3.pdf יום שלי | מכללת תל חי... תרגיל בית מס' 2 - HW... ChatGPT SML

Tests Randomness Of Codes

Choose random generator:
Time Nano random generator

Choose test name:
Frequency Test (Chi-Squared)

Number of Samples:
10000 ((generator_name ~time_sec_in_my_computer/
amount_samples) (javathread ~18s/100), (import_random ~3s/10,000), (sound ~9s/100) (time
~16s/1000))

Upper Bound for generator:
999999 (time_generator max_upper_bound is 999999)
(sound_generator max_upper_bound is 10^18) (java_thread max_upper_bound is 2147483647
(int))

Run Test Stop test

Status: Done
Result: 0s=94567, 1s=93958, p=0.1607, PASS
(Test finished)

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```
File Edit Search Source Run Debug Consoles Projects Tools View Help
C:\Users\user\Desktop\Project\templates\direct.html
untitled40.py x app.py - Project x generators.py x direct.html x
13 <input type="number" name=
14 <!-- Display of valid uppe
15 <small>
16 (time_generator max_up
17 (sound_generator max_u
18 (java_thread max_upper
19 </small>
20 <br><br>
21 <!-- Each button triggers
22 <button type="submit" name
23 <button type="submit" name
24 <button type="submit" name
25 <button type="submit" name
26 </form>
27
28 <!-- Output area: shows the re
29 {% if output %}
30 <hr>
31 <h3>=== OUTPUT ===</h3>
32 <div style="margin-top:24px; f
33 {{ output }}
34 </div>
35 {% endif %}
36
37 <br>
38
39 <!-- Button form for navigatio
40 <form action="{{ url_for('test
41 <button type="submit">MOVE
42 </form>
43 <!-- Decorative image: cubes v
44 <img src="{{ url_for('static',
45 </body>
46 </html>
47
```

Name	Type	Size	Value
generator_names	dict	4	{'javathreads': 'Java Generator'...
stopped_tasks	set	0	{}

Variable explorer Help Plots Find Profiler Code Analysis

Console 47/A

```
[>] random_number: 291173
[4] random_number: 456161
[5] random_number: 604968
[6] random_number: 726760
[7] random_number: 862050
[8] random_number: 18715
[9] random_number: 156999
Total bits collected from time : 189
generator_name: time, test_type: frequency
[0] random_number: 147503
[1] random_number: 278750
[2] random_number: 453029
[3] random_number: 587099
[4] random_number: 726047
[5] random_number: 874049
[6] random_number: 998351
[7] random_number: 137350
[8] random_number: 255916
[9] random_number: 422167
[10] random_number: 584688
[11] random_number: 727365
[12] random_number: 852397
[13] random_number: 9527
[14] random_number: 145194
[15] random_number: 309743
[16] random_number: 449948
[17] random_number: 616967
[18] random_number: 770710
[19] random_number: 915769
[20] random_number: 41432
[21] random_number: 214754
[22] random_number: 374951
[23] random_number: 531297
[24] random_number: 652493
[25] random_number: 811922
[26] random_number: 946331
```

http://127.0.0.1:5000/tests? 160% ☆

פוסטל תל חי עבודות להגשה https://moodle.telhai... ex3.pdf מכללת תל חי יום שלי תרגיל בית מס' 2 HW... ChatGPT SML

Tests Randomness Of Codes

Choose random generator:
Time Nano random generator

Choose test name:
Frequency Test (Chi-Squared)

Number of Samples:
100 ((generator_name ~time_sec_in_my_computer/amount_samples) (javathread ~18s/100), (import_random ~3s/10,000), (sound ~9s/100) (time ~16s/1000))

Upper Bound for generator:
999999 (time_generator max_upper_bound is 999999)
(sound_generator max_upper_bound is 10^18) (java_thread max_upper_bound is 2147483647 (int))

Run Test Stop test

Status: Done
Result: 0s=958, 1s=929, p=0.5044, PASS
(Test finished)

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