Results of Lab 1

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Numerical Input

2 points possible (graded)

Results of Lab1

Please fill in the values that have been returned at the end of the lab when executing the code with your inputs:

V1

V2

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NEED ANY HELP?

Ask your questions about this specific section and lesson below! We encourage you to answer each other's questions. One of the best ways to reinforce your own knowledge of a topic is to explain it to someone else!

Discussions about Lab 1

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Lab 1

discussion posted 4 months ago by **A_Hopma**

Please ask your questions about Lab 1 here. We're here to help !

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4 responses

mirlidex
about a month ago

Everything worked out great for this first week. Thanks for the course.

Thank you mirlidex!

posted about a month ago by **Sandrine_VATON** (Staff)

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Sandrine_VATON (Staff)
about a month ago

Hi,

First of all I would like to make sure that you have read the instructions in Week 0/ About the Labs/How to use notebooks.

Variables Vi are computed automatically if you run the cells of the notebook once you have completed the code. If the way you have completed the code is correct, then you should automatically get correct values for V1 and V2. These variables are there just to check that the code works fine.

I hope that this helps. Please tell us if you need additional hints.

Best regards,

HI, I have a problem with Q1 only. I hope I am filling the right coefficient for V1=lambda_??

posted about a month ago by**daud_minhas**

What is the cumulative distribution function $F(x)$ for a exponential distribution, and what then is its inverse $F^{-1}(x)$?

Perhaps it would have been even clearer if the code had been

```
data = V1 * log(1 - rand(N))
```

But if `rand(N)` is $U(0,1)$ then also `1-rand(N)` is $U(0,1)$, which justifies the code as is.

`V1` indeed is function of `lambda_` but `V1=lambda_`might not be correct.

posted about a month ago by**mrBB**

Perfect... Thanks

posted about a month ago by**daud_minhas**

Thank you mrBB for helping!

posted about a month ago by**Sandrine_VATON** (Staff)

One can also use the exponential distribution function from numpy to draw the N samples of an exp(lambda_) distribution like this. Right?

```
import numpy as np

lambda_=2

N=10**5

data=
np.random.exponential(s
cale=1/lambda_ ,size=N)
```

posted about a month ago by**Firmin_py**

Of course, and it is interesting to note that, internally, numpy also uses the CDF inversion method to sample from the exponential distribution. From numpy source code, distributions.c, line 110:

```
double
rk_standard_exponent
ial(rk_state *state)
{
    /* We use -
log(1-U) since U is
[0, 1) */
    return -log(1.0
- rk_double(state));
}
```

posted about a month ago by**MaximeMouchet** (Staff)

Add a comment

Anita-Hsu
23 days ago

HI, I have a question: I don't know how to get correct answer for V1: My V1= 2.00 and V2 = 19.99.

I barely know MySQL and don't know anything about python. I tried to follow the instruction to use the notebook and fill in input in ....

however, I still cannot get the correct V1. can someone help me?

thank you so much!

Hi,

You can have a look at mrBB answer above. Try to find the inverse of the cumulative distribution function of the exponential distribution, and V1 should follow.

posted 22 days ago by**MaximeMouchet** (Staff)

Add a comment

Am4719
7 days ago

Hi,

What resources could i read or watch to understand the mathematical equations? I'm lost with term :(I wanted to participate in this course to understand queuing theory for manufacturing application but finding it difficult to follow heavy maths. Any help would be hugely appreciated :)

Thank you for the course,

Regards

Hi Am4719,

I think that you should follow an introductory course on probability.

Regards,

posted 6 days ago by**Sandrine_VATON** (Staff)