CUDA Python

1.　　　Numba　　CUDA Python

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> ## 评估
>
> 下面的练习将用到您目前所学的全部知识。不同于之前的练习，本次练习不提供任何解决方
> 有需要评估的问题。成功完成全部课程的评估问题后，您将获得本课程的**"能力证书"**。

●
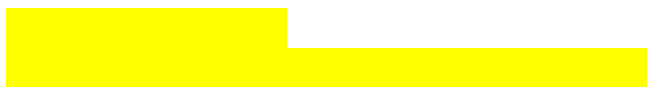
================= 下一格 =================

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● ，执行时间小于 1 秒就可以：

```
from assessment import assess

assess(create_hidden_layer, arguments)
Setting n to 100 million.

Your function returns a host np.ndarray: True

Your function took 0.47s to run.
Your function runs fast enough (less than 1 second): True

Your function returns the correct results: True
Congratulations, you passed! See the instructions below for how to get credit for your work to count toward a certificate in the course.
```
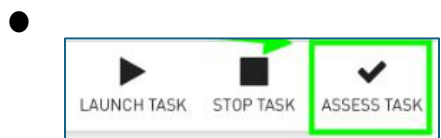
●

● 就

2.   Numba   Python   CUDA

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     ......   /   .   ...

-        **assessment/histogram.py**

-                    .

ELQBQXPQ

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讲稿: 全局内存的合并访问

执行以下单元格以加载幻灯片，然后单击"Start Slide Show"（"开始幻灯片放映"）可使其全屏显示。

```
In [11]:  from IPython.display import IFrame
          IFrame('https://view.officeapps.live.com/op/view.aspx?src=https://developer.download.nvidia.com/training/courses/C-A
Out[11]:
```


PowerPoint

📄 下载   ☁ 保存到 OneDrive   🖵 开始放映幻灯片   🖶 打印为 PDF 格式   ⋯

内存合并

评估：解决内存区冲突

作为题目的练习，为了在课程的最后一部分中获得证书，您将使用共享内存重构矩阵转置者核函数，使其没有共享内存区的冲突。

(32, 32)   (33, 33)

```python
@cuda.jit
def tile_transpose_conflict_free(a, transposed):
    # `tile_transpose` assumes it is launched with a 32x32 block dimension,
    # and that `a` is a multiple of these dimensions.

    # 1) Create 32x32 shared memory array.
    tile = cuda.shared.array((32, 32), numba_types.int32)
```
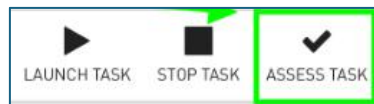

- 840

```
assess(tile_transpose_conflict_free)


Your function took 805.34 µs to run.    ⟵

Your function runs fast enough (less than 840 µs): True

Your function returns the correct results: True

Congratulations, you passed! See the instructions below for how to get credit for your work to count toward a certificate in the course.
```

- "   "

▶ LAUNCH TASK   ■ STOP TASK   ✓ ASSESS TASK

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ℹ Grade Feedback

all 3

Congratulations, you passed
the assessment! Check the
"Progress" tab to see your course progress.
After you have completed the assessment in

tasks, click the "View Certificate" button
to receive your certificate for the workshop.