



```
from google.colab import files
uploaded = files.upload()
```


 Choose Files acf\_gpu.cu

- **acf\_gpu.cu**(n/a) - 4157 bytes, last modified: 6/10/2025 - 100% done



```
!nvcc --std=c++11 acf_gpu.cu -o acf_gpu -arch=sm_75
```


```
!./acf_gpu small_data.txt
```

 Calculating ACF for 5 points  
Angular Correlation Function Histogram:

0-1 deg:	0
1-2 deg:	0
2-3 deg:	0
3-4 deg:	0
4-5 deg:	0
5-6 deg:	0
6-7 deg:	4
7-8 deg:	0
8-9 deg:	0
9-10 deg:	0

Time taken (GPU): 0.00026811 seconds

```
!./acf_gpu data_100k_degrees.txt
```

 Calculating ACF for 100000 points  
Angular Correlation Function Histogram:

0-1 deg:	9339213
1-2 deg:	17136521
2-3 deg:	23483661
3-4 deg:	28998387
4-5 deg:	34312638
5-6 deg:	39522646
6-7 deg:	44685139
7-8 deg:	49100130
8-9 deg:	52778750
9-10 deg:	58052876

Time taken (GPU): 6.89996 seconds

