ISC 4304C

Lab 9

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* Runtimes:

Python - julia.py = 1 min 37.5 sec

Python + numba - Lab\_9.py = 3.89 sec

Python + numba + using GPU - Lab\_9\_GPU.py = 3.84 sec

As seen above, numba was able to lower the execution time from 1 minute and 37 seconds to merely 4 seconds. It should be noted that the code was barely changed from the original just adding the decorations to specify which functions are to be instrumented with numba. This is a very noticeable speed up for very little effort.

* Difficulties encountered:

There weren’t any major difficulties when completing this lab, however I did have to look up how the numba syntax for the decorations was since I was confused as to how it worked. The syntax is different from most of the python that I have seen so far.

Other than that I didn’t have any difficulties, but I should mention that I was expecting Lab\_9\_GPU.py to be significantly faster than Lab\_9.py since my computer has a decent GPU.