**CST-305: Project 8 Honors Work**

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CST-305: **Principles of Modeling and Simulation Lecture & Lab**

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In addition to the project 8, I was told to run the 2 codes models of the Riemann code on a Raspberry pi. I used a raspberry pi 4. Then I need to compare it to the original implantation which was on my Mac with M1 chip.

The Raspberry Pi 4 and a Mac with an M1 chip represent two different ends of the spectrum in terms of computing power and capabilities. The first thing we would compare would be the performance of the two.

When it comes to performance, The Raspberry Pi 4, while capable for its size and price, has a quad-core ARM Cortex-A72 CPU, which is significantly less powerful compared to the M1 chip. The Mac with an M1 chip generally offers much higher processing power compared to the Raspberry Pi 4. The M1 chip is designed by Apple and features a combination of high-performance CPU cores and energy-efficient cores, resulting in impressive performance for various tasks.

Now we will talk about the Visualization Capabilities of the two.

Macs with M1 chips can drive high-resolution displays with ease and support advanced graphics rendering, making them suitable for tasks requiring intensive visualization, such as 3D modeling, video editing, and graphic design. Raspberry Pi 4 can handle basic graphical tasks and can be connected to displays via HDMI. However, its GPU capabilities are modest compared to the integrated graphics in Macs with M1 chips, limiting its performance in tasks requiring advanced visualization. Also in the video you will see how slow the pi was to generate the graphs versus the M1.

The link below is me running the Riemann code on both devices.

Video Link for the Report: <https://youtu.be/8ikYuSnEJLw>