EECS 739: GPU Optimization Project (of your choice)

Due: See below for due dates.

For this project, you are completing a GPU optimization project of your choice (on which you must first obtain my approval). The goal of the project is for you to parallelize and implement an optimization algorithm using GPUs and to learn something new. There is significant flexibility in the choice of project. For example, you could do a performance comparison of GPU and MPI implementations of a parallel optimization algorithm. Another possibility would be to explore a real-world application of parallel optimization. We will spend a few minutes discussing some possibilities in class.

Submission: Submit a zip file of any code, input/output files, etc. (as relevant to your project), your project report in PDF format, and your project presentation slides in PPTX or PDF format to shontz@ku.edu by the deadline given below.

Timeline:

1. **Monday, April 22:** ½-page project proposal due at 3pm. Your project proposal should state what you plan to do in enough detail that I can understand how it meets the requirements.

2. **Wednesday, May 15:** Project, report, and presentation due at 1:30pm. **Note: LATE SUBMISSIONS WILL NOT BE ACCEPTED, AS I MUST SUBMIT FINAL GRADES ON TIME.**

Grading: This project is worth 35% of your final grade. In terms of the project, project material (such as your implementation, etc.) will count for 70% of the project grade, whereas the project report and project presentation will each count for 15% of your grade on the project. Your project will be evaluated on parallelization strategy, quality of coding, the results (as relevant), other relevant aspects (e.g., the real-world application), and effort invested. Your report will be graded according to clarity, appropriate use of figures, quality of the writing, and adherence to page length requirements. While there is no fixed page length requirement for your report, it should be of an appropriate length to cover your work on this topic. Ten pages is considered the minimum acceptable length. The report should be written in good English and should resemble a mini-conference/journal paper. Your presentation will be graded according to clarity, appropriate use of visual aids, quality of presentation, and adherence to time requirements. The presentation will be in class and approximately 20-25 minutes long (including questions).