

Topic Selection

At the broadest scope, I am choosing for my project to do a survey on Tensors and Parallelism. In getting more specific I am looking into Tucker Decomposition of data, and algorithms for Tucker Decomposition in parallel. Admittedly, the topic of Tucker Decomposition is entirely new to me. Therefore, the details of this topic will be discovered as I learn more, and, obviously, the scope of the project may need to change slightly over time. Currently I am collecting many papers on on Tucker Decomposition algorithms, many of which have to do with either sparsity in Tensors or with random sampling of tensors. Another topic for which I am collecting papers relate to performing such algorithms in parallel. Very briefly, I am seeing that these algorithms may have application in compressing and analyzing data while streaming the data. Again, as of now, I am holding the scope of this project loosely around the ideas of Tucker Decomposition and Parallel implementations of these algorithms. As I become more familiar, I will be able to narrow in on the specifics of the topic.