

- (1) Write a matrix-vector multiplication program using MPI. The inputs are a matrix and a vector from a file. The outputs are the number of processors used, intermediate results from each processor, and the final vector.
- (2) Write a survey paper on a big data-related algorithm topic of your choice. A recommended length of the survey paper is 3 single-spaced pages. Please make sure that you refer to the other survey papers to make yours an appropriate title, an abstract, and appropriate content and findings. Although you survey others' work, you must use your words and make necessary and proper citations.

Please turn in your survey paper in pdf format electronically.