

CS508: Introduction to Heterogeneous Computing

Programing Assignmnet-1

1. Generate N random numbers and store it in a file. Write a sequential program in C to sort N numbers (read from the file) in ascending order using Quick sort.
2. Iris dataset (`iris.data`) is given to you. The fifth column of the data file contain class name. There are 3 classes. Ignore the last column and consider only 4 columns. Consider each row as a data vector of 4 values (i.e. 4-dimensional vector). There are around 150 rows (150 vectors) in the data file. Write a sequential program in C to normalise each column using z-score normalization. The procedure is attached in the slides.
3. Consider the Iris dataset as in question 2. Write a sequential program in C to implement K -means clustering algorithm. Read the value of K from the user. The output of the program should be the cluster centres.