1. Design and implement Parallel Breadth First Search based on existing algorithms using OpenMP. Use a Tree or an undirected graph for BFS.
2. Design and implement Parallel Depth First Search based on existing algorithms using OpenMP. Use a Tree or an undirected graph for DFS.
3. Write a program to implement Parallel Bubble Sort using OpenMP. Use existing algorithms and measure the performance of sequential and parallel algorithms.
4. Write a program to implement Parallel Merge sort using OpenMP. Use existing algorithms and measure the performance of sequential and parallel algorithms.
5. Implement Min, Max, Sum and Average operations using Parallel Reduction.
6. Write a CUDA Program for Addition of two large vectors
7. Write a CUDA Program for Matrix Multiplication using CUDA
8. Linear regression by using Deep Neural network: Implement Boston housing price prediction problem by Linear regression using Deep Neural network. Use Boston House price prediction dataset.
9. Classification using Deep neural network: Binary classification using Deep Neural Networks Example: Classify movie reviews into positive" reviews and "negative" reviews, just based on the text content of the reviews. Use IMDB dataset
10. Convolutional neural network (CNN): Use MNIST Fashion Dataset and create a classifier to classify fashion clothing into categories.
11. Recurrent neural network (RNN) Use the Google stock prices dataset and design a time series analysis and prediction system using RNN.