

1. C/CUDA Based

- Design ***Parallel Vector Matrix Multiplication Algorithm*** and Implement using CUDA; evaluate its performance for varying data size grid and block size assuming separate device and host memories.
- Design ***Parallel Matrix Multiplication Algorithm*** and Implement using CUDA; evaluate its performance for varying data size (100x100, 200x100, 1000x2000, 5000x4000 data) varying grid and block size assuming separate device and host memories.
- Design ***Parallel Shortest Path Algorithm*** (say Dijkstra or Floyd Algorithm) and Implement using CUDA evaluate its performance for varying data size grid and block size assuming separate device and host memories.
- Design ***Parallel Mandelbrot Set Algorithm*** and Implement using CUDA; evaluate its performance for varying network size, varying grid and block size assuming separate device and host memories.