**ECEN 5593  
Advanced Computer Architecture**

**Project**: Implementation and Analysis of Dijkstra’s Algorithm and Floyd Warshall’s Algorithm: OpenMP and CUDA

**Authors**: Anirudh Tiwari & Vishal Vishnani

**Date**: May 10th, 2017

**Supported Hardware**: NVIDIA JETSON TX1

**File Structure**:

1. Dijkstra.c: Consists of Serial and OpenMP implementation of Dijkstra’s Algorithm
2. Dijkstra.cu: Consists of Serial and CUDA implementation of Dijkstra’s Algorithm
3. Floyd\_Warshall.c: Consists of Serial and OpenMP implementation of Dijkstra’s Algorithm
4. Floyd\_Warshall.cu: Consists of Serial and CUDA implementation of Dijkstra’s Algorithm
5. Makefile: To run the above files

**Project Execution:**

1. Dijkstra’s Algorithm:
2. To run Serial vs OpenMP

* make Dijkstra\_CPU.out
* ./Dijkstra\_CPU.out

1. To run CPU vs GPU

* make Dijkstra\_GPU.out
* ./Dijkstra\_GPU.out

1. Floyd Warshall’s Algorithm
2. To run Serial vs OpenMP

* make Floyd\_CPU.out
* ./Floyd\_CPU.out

1. To run CPU vs GPU

* make Floyd\_GPU.out
* ./Floyd\_GPU.out