

### Assignment-3

Deadline: 3rd March 2023

**Q.1** Construct the Minimum Spanning Tree (MST) on the dataset which you selected in your project.

**Q.2** Identify the expected clusters by deleting the k-number of inconsistent edges of MST, where inconsistent edges are defined as longest edges [1], and k is the number of clusters in your dataset .

**Q.3** Identify the clusters by deleting edges which reduces the maximum standard deviation of the edges of MST [1].

**Q.4** Compare the computed clusters of question 2 & 3 in terms of cluster quality and execution time.

#### Reference:

[1] Grygorash, Oleksandr, Yan Zhou, and Zach Jorgensen. "Minimum spanning tree based clustering algorithms." *2006 18th IEEE International Conference on Tools with Artificial Intelligence (ICTAI'06)*. IEEE, 2006.