**Files:**

1. Lagrange.m

Functions: Solve\_p\_median: Input (Sn, Ch, p, L) 🡪 Returns (X, Y).

1. Solve\_p\_median:

Solves the P-Median Problem for a given configuration.

1. stoppingCondition.m

Function: Checks Stopping Condition (iterationNo > 15000 | (bestUB == bestLB))

1. getCost.m

Calculates the Euclidean Distance

1. allocateClusterHeadPositions.m

Allocating The Cluster Head Positions Cluster Heads  
6) assignClusterHead.m

Function: assignClusterHead(X,Sn,Ch,D):   
Assigning The Closest Selected Cluster Head Position To The Sensor Node

1. whenDidLastImprovementOccur.m
2. improvementsOccur.m
3. findUB.m
4. plotClusters.m
5. getcolor.m
6. getAllocatedClusterHeads.m
7. findLB.m

**Phases:**

1. **The P-Median Solver: Done.**
2. **Express in terms of energy.**
3. **Bring In the energy model into picture. (following LEACH here.)**