

Abstract

We consider the problem of covering a given set of points on the grid, by a set of circles of varying radius. Formally, we are given a set of black points B on the grid. We would like to find a minimum cardinality subset of circles C_{opt} , such that for each point $p \in B$, there exists at least one circle in our solution set C_{opt} , that contain p . In the first phase of our work, we tried to cover these points on the grid by drawing all possible circles and in the second phase we analysed how to get minimum subset of circles to cover these black points and proposed two different approaches, Greedy Approach and Boundary Point Approach that gives nearly optimal solution.