

# Abstract

Health is the most important thing in this world. For it in the support we need to make health facilities and infrastructure so that the public can more quickly in dealing with the emergency. Hospital (emergency room) is one of the most important in a health, hospital/emergency room greatly affects the intensity of community/patient to visit and inspect the health, hospital layout become points the main influence of many at least a community come home sick, for that we need to put the hospital conveniently located for easy reach.

The determination of the priority of the layout of the hospital is considered a problem, for it is need for formulation in dealing with the problem, the factors that affect the problem is the number of population density in each of the territories in relation to the same with the number of hospitals that are in each region, one way to determine a strategic location then needed an analysis method using Voronoi, Convex hull, Delaunay triangulation, Geometry Demo and Arcmap. In this nal task, the authors aimed to determine the placement of the candidates hospitals using the Voronoi method, Convex hull, Delaunay triangulation and coordinate data required to define a strategic location that would later become a reference to the construction of the new hospital.

Keywords: Voronoi Diagram, Convex Hull, Delaunay Triangulation, Geometry Demo, ArcMap