Sistem Informasi Geografis Tingkat Kriminalitas Kota Jember

Menggunakan Metode K-Means

Geographic Information System for Crime Rate in Jember City Using the K-Means Method.

Pembimbing (1 orang)

Elly Antika S.T ,M.Kom.

Fitroh Fathur Rohman

Study Program Informatics Engineering

Majoring of Information Technology

Program Studi Teknik Informatika

Jurusan Teknologi Informasi

ABSTRACT

This study focuses on the development of a Geographic Information System (GIS) to map the crime rate in Jember City using the K-Means method. The research background highlights the high crime rates in Indonesia and specifically in Jember City, particularly around campuses and densely populated areas. Previous studies have been conducted in other areas using the Kernel Destiny and K-Means methods to analyze crime-prone areas. The research problem formulation aims to design a crime rate GIS in Jember City, implement the system using the Waterfall method, and conduct testing on the developed system. The research objectives include designing a crime rate GIS using the K-Means method, implementing the designed system using the Waterfall method, and performing testing on the developed system. The research limitations encompass a web-based system, crime parameters (such as theft, robbery, and vehicle theft), data limitations from 2020 to 2021, and the use of 2 or 3 clusters. The study employs literature review and primary data collection from the Jember Police Resort as a reference. The data processing involves the K-Means Clustering method with 3 clusters: high-crime areas, moderate-crime areas, and low-crime areas.

Keyword *: Crime, Geographic Information System, Clustering, K-Means*