

## **ABSTRACT**

*Tourism is one of the largest industrial sectors for economic growth in Indonesia. After the Covid-19 pandemic, in 2022, the Banyuwangi Regency Culture and Tourism Office (DISBUDPAR) has a target of increasing tourist destinations by IDR 10.635 billion. This can be achieved by designing a strategy for developing tourism objects and building potential new tourist objects. In the development of tourism in an area has a limited budget. Banyuwangi DISBUDPAR must determine priorities for tourist objects to be developed. Therefore, this final project is carried out to obtain a decision support system design that can help the government of Banyuwangi Regency.*

*The K-Means method is used in the process of grouping objects which gives results in the form of decision priority rankings. The stages of the process are data preprocessing, determining the number of clusters, determining the initial centroid, calculating the data distance to the centroid, grouping data based on the shortest distance, determining the new centroid and cluster results. This system is a website-based system created using R-Studio with the R-Shiny package.*

*The result of this final project is a decision support system to determine priorities for the development of natural tourism objects in Banyuwangi Regency which can perform data processing and produce priority alternatives for natural tourism objects. The system has features for uploading tourist object data, clustering graphs and producing output in the form of ranking priorities for the development of natural tourism objects.*

*The conclusion of this final project is that a website-based decision support system design is obtained in Banyuwangi Regency to make it easier to determine the priority of which natural tourism objects will be developed. With this system, decisions can be made quickly and accurately and can streamline the existing budget.*

**Keywords: Banyuwangi Regency, K-Means, Tourist Attractions, Decision Support System, R Studio**