

Geographic Information System Application for Predicting Tourism Development in Gunungkidul Regency, Indonesia

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Abstract : Gunungkidul is one of the emerging tourism industry areas in Yogyakarta Province, Indonesia. This article describes how GIS can predict the development of tourism potential in Gunungkidul. The tourism sector in Gunungkidul Regency contributes 3.34% of the total gross regional domestic product and is the economic sector with the highest growth with a percentage of 18.37% in the post-Covid-19 period. This contribution makes researchers consider that several tourist sites need to be explored more to increase regional economic development gradually. This research starts by collecting spatial data from tourist locations tourists want to visit in Gunungkidul Regency based on survey data from 571 respondents. Then the data is visualized with ArcGIS software. This research shows an overview of tourist destinations interested in travellers depicted from the lowest to the highest from the data visualization. Based on the data visualization results, specific tourist locations potentially developed to influence the surrounding economy positively. The visualization of the data displayed is also in the form of a desire line map that shows tourist travel patterns from the origin of the tourist to the destination of the tourist location of interest. From the desire line, the prediction of the path of tourist sites with a high frequency of transportation activity can figure out. Predictions regarding specific tourist location routes that high transportation activities can burden can consider which routes will be chosen. The route also needs to be improved in terms of capacity and quality. The goal is to provide a sense of security and comfort for tourists who drive and positively impact the tourist sites traversed by the route.

Keywords : tourism development, GIS and survey, transportation, potential desire line

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