

# CREATION OF DIGITAL MAPS FOR ACCIDENT-PRONE AREAS USING THE *RATIONAL UNIFIED PROCESS* METHOD

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## ABSTRACT

The rate of traffic accidents in Indonesia continues to increase every year. In 2023, 148,307 accidents were recorded, a 5.75% increase compared to 2022. On Bengkalis Island alone, traffic accidents also increased from 110 cases in 2022 to 120 cases in 2023. One of the causes of the high accident rate is the lack of information among drivers regarding accident-prone areas, where the information currently available is only obtained through socialization from the police or traffic signs that are often incomplete. To address this problem, this study designed and built a Digital Map System for Accident-Prone Areas that can provide accurate information on accident-prone locations and display warning notifications to drivers when approaching those areas. The result of this study is a digital map system that can provide information on accident-prone locations on the highway and provide warnings to road users.

**Keywords:** GIS, *multiplatform*, *Rational Unified Process method*, *traffic accidents*.