

## **ABSTRACT**

### **DESIGN AND DEVELOPMENT OF A WEBSITE-BASED GEOGRAPHIC INFORMATION SYSTEM BACK-END FOR THE REGIONAL DISASTER MANAGEMENT AGENCY**

By

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*The internship activities program at PT. Hendrawan Media Artha is an educational or training program where individuals can gain practical experience and delve into specific fields relevant to their interests or education. This program provides hands-on experience and skills in web-based application development. In an increasingly advanced digital era, visual communication design and computer education play vital roles in various industrial sectors, including the geographical sector. Geographic Information Systems (GIS) are designed to efficiently and interactively collect, manage, analyze, and present geographical data related to disasters, particularly in the South Sorong area. This report discusses the back-end design process of a web-based geographic information system for BPBD South Sorong, aiming to create an interactive and responsive platform that can display real-time geographical information about disasters in the South Sorong area. The design process begins with a needs analysis through data collection using various methods, including interviews, observations, and relevant literature studies. It is then implemented using PHP programming language and its framework, laravel, as part of the back-end design. The developed information system is thoroughly tested using the black box testing method to ensure that each feature functions as expected. The testing results show that the designed system is valid and meets user needs, providing a good experience in disaster data management in the South Sorong area*

**Keywords:** *Geographic Information System, Web developer, Back-end, PT. Hendrawan Media Artha.*