

ABSTRACT

Emergency calls in Indonesia are still implementing satellite call technology to call emergency agencies such as the police. Indonesia already has a universal emergency number, but its implementation is still not evenly distributed in all cities/districts, where the emergency number is 112. Most Indonesians rarely know this number because information from this number is less published and people tend to use the internet more than using conventional calls. .

By utilizing an internet-based application, the author can build a calling application that is combined with Google Maps to provide an image display from a digital map and provide an automatic route from the caller's location to the location of the agency that is called directly. To determine this route, 2 Routing Algorithms will be analyzed, namely the Hill Climbing and Greedy algorithms.

In this final project, a smartphone-based emergency call application is developed. There is a best route finding feature developed using Hill Climbing and Greedy algorithms. The performance of the two algorithms is compared in the context of finding the best route from the user's location to the relevant agency using the algorithm value parameter and travel time duration. Based on the test results, the Greedy algorithm gives the best results based on the response time. With an average response time of 0.912, while the Hill Climbing Algorithm is 1.59. Researchers use SAW weights of 30% for the distance parameter and 70% for the duration parameter which has a total range value between nodes of 0.022. This application has an alpha or functionality test value of 100% which indicates that the application has been running well according to its function.

Keywords: *Shortest Route, Artificial Intelligence, Hill Climbing Algorithm, Greedy Algorithm, Google Maps.*