Abstract

The geographical location of Indonesia is included in the Ring of Fire area which causes many volcanic eruptions and earthquakes. Earthquake is also a lot happening in Indonesia, one of the causes is that Indonesia has many active volcanoes and can cause volcanic earthquake. Earthquake can also be caused by several factors, one of which is the shift of tectonic plates that can be fatal to the life of living things when occurring on a large scale. With technological advances at this time, there has been a lot of technology created; one of which is for early warning of earthquakes to artificial intelligence that can predict when and where the aftershocks will occur. To assist in the evacuation process in the buildings efficiently, the study is intended to be able to show the nearest emergency exit or exit and away from the source of vibration. In the built-in system, the validation process will later be proven by comparing the final path generated with the result of each selected local optimum. Testing was conducted with two different scenarios. The first scenario showed that there was an indication of vibration anomaly on the exit node. Meanwhile, for the second scenario, there is no vibration anomaly. The test results in a final path ending with an accuracy rate of 100% with the results obtained by each test scenario different depending on the tested scenario.

Keywords: Earthquake, Emergency Light, Algoritma Greedy Search