Smart Parking: Modeling and Analysis Parking Recommendation Using A-Star Algorithm and Dijkstra Algorithm

Giani Suhikmat[1], Maman Abdurohman[2], Aji Gautama Putrada[3]

[1,2,3]Faculty of Informatics, University of Telkom, Bandung
[1]gianisuhikmat@students.telkomuniversity.ac.id, [2]abdurohman@telkomuniversity.ac.id,
[3]ajigps@telkomuniversity.ac.id

Abstract

Smart City is inseparable from its environment, one of which is a Smart Parking, Parking has become one of the serious issues in urban areas, the increase in vehicle users has resulted in the availability of increasingly large parking lots, user convenience to parking areas is certainly one thing to note. The Smart Parking Recommendation system is proposed to help parking lot users get the closest parking lot to the entrance of the building so that parking users can be easier. Detection technology is reviewed and compared to get the best parking space. The Smart Parking Recommendation feature is viewed from the detection of empty parking spaces using microcontroller devices and focuses on data processing for parking space recommendations using the A-Star Algebraic and Dijkstra's Algorithms because this Algorithm is considered to be quite good in terms of Completeness, and Time Complexity with Dijkstra's algorithm that works faster at 92.4% compared to the A-Star Algorithm.

Keywords: ***Smart Parking, Mikrokontroller, Parking IoT Recommendation, A-Star Algorithm, Dijkstra's Algorithm.***