Implementation of Dijkstra's Algorithm for Traffic Flow in Smart City using Raspberry Pi Board

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Abstract: *Today, Traffic congestion Problems are avoid less in road network application such as in smart cities. The traffic density in a city changes from time to time sometimes there are increases huge amount of traffic and sometimes there are very minimum amount of traffic density also traffic profiles describe the time needed to pass the road based on time which also differs for work days and weekend. So it is very difficult to choose shortest time route form source to destination. The basic idea behind this is the implementation of one efficient method which is helpful for smooth and faster traffic flow in smart cities. Now a day's traffic congestion is the biggest problem in smart cities. Proposed system creates data base based on history of traffic conditions and find where traffic density is high according to time, day and date. Major role to the people live in various states, cities, town and villages, from each and every day they travel to work, to schools, to business meetings, and to transport their goods. Even in this modern era whole world used roads, remain one of the most useful mediums used most frequently for transportation and travel. The manipulation of shortest paths between various locations appears to be a major problem in the road networks. The large range of applications and product was introduced to solve or overcome the difficulties by developing different shortest path algorithms. Even now the problem still exists to find the shortest path for road networks. Shortest Path problems are inevitable in road network applications such as city emergency handling and drive guiding system. Basic concepts of network analysis in connection with traffic issues are explored. The traffic condition among a city changes from time to time and there are usually huge amounts of requests occur, it needs to find the solution quickly.*

Keywords: Road Network, Route Planning, Shortest Roads Play a Path, Raspberry Pi, Dijkstra Algorithm.

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