Abstract

This paper presents a system which determines an optimal traffic route using the shortest path approach. The client requests the optimal traffic route from a given source to destination, and the server sends a response with image processing.

The proposed system uses Dijkstra’s algorithm to find an optimal traffic route as the shortest cost path. Every node is considered as a place in the route from the given source to destination. The cost of the path between two nodes is the vehicle count. According to the cost of the nodes, the system suggests the optimal traffic route from the given source to destination.

For detecting vehicle density, different image processing techniques and algorithms are used, such as background subtraction, image filtering, image binary, and segmentation. The system processes on pre-recorded video streams at the server side and suggests the optimal traffic route. The paper also focuses on the New Inter Frame Difference algorithm for image processing for vehicle density detection.
References

7. Shortest path algorithms: An Evaluation using real road networks - article in Transportation Science: Feb 1998 - Source: DBLP.

Index Terms

Computer Science
Networks

Keywords

Adaptive Background Generation, Morphological Filtering, Virtual Detector.