Abstract

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

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 the 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 the destination.

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

5. Wenxuan Shi and Jie Li-EURASIP Journal on Advances in signal processing –a Springeropen Journal 2012.

Index Terms

Computer Science

Networks

Keywords

Adaptive Background Generation, Morphological Filtering, Virtual Detector.