Abstract

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

The proposed system uses Dijkstra’s algorithm to find the 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. The system suggests the optimal traffic route based on the cost of the nodes.

To detect vehicle density, different image processing techniques and algorithms are used, such as background subtraction, image filtering, image binary, and segmentation. The system processes a pre-recorded video stream at the server side and suggests the optimal traffic route. The paper also focuses on the New Inter frame Difference algorithm for image processing in 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.