Abstract

Intelligent Transportation Systems (ITS) and Advanced Traveller Information Systems (ATIS) are the emerging areas of research. They focus with keen interest to solve the issues in traffic management and planning and designing infrastructure to meet the demanding needs of the general public. Many research articles focus on developing video surveillance algorithms for processing video data captured at real-time traffic scenes, but as there is a huge demand for more sophisticated software systems, complexity of the algorithms gets increased in terms of data storage and large scale processing. This research article focuses on refining a framework for large scale video analytics while incorporating the simple, light-weight aspects of a video surveillance algorithm, and makes an insight by adopting blob tracking based video surveillance algorithm for large scale video analytics. The proposed system uses hadoop’ map-reduce function to clean and pre-process the hours of traffic video captured in the local site stores. It summarizes and transmits the key frames of the video data to the central computing server to analyses the video frames. The key frame differencing method has been justified as a pronouncing method for data preprocessing and cleaning. Further this system follows the Blob

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detection, Identification and Tracking using connected components algorithm to determine the correlation between the vehicles moving in the real road scene.

References


Index Terms

Computer Science Image Processing
Keywords

Large scale video analytics, Road traffic surveillance system, Blob detection, Traffic density estimation, Video Systems and Analytics, Intelligent Video Systems (IVS) in big data