

## Flowing Online Vehicle GPS Data Clustering Using a New Parallel K-Means Algorithm

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**Abstract :** This study presents a new parallel approach clustering of GPS data. Evaluation has been made by comparing execution time of various clustering algorithms on GPS data. This paper aims to propose a parallel based on neighborhood K-means algorithm to make it faster. The proposed parallelization approach assumes that each GPS data represents a vehicle and to communicate between vehicles close to each other after vehicles are clustered. This parallelization approach has been examined on different sized continuously changing GPS data and compared with serial K-means algorithm and other serial clustering algorithms. The results demonstrated that proposed parallel K-means algorithm has been shown to work much faster than other clustering algorithms.

**Keywords :** parallel k-means algorithm, parallel clustering, clustering algorithms, clustering on flowing data

**Conference Title :** ICADPC 2018 : International Conference on Advances in Distributed and Parallel Computing

**Conference Location :** Miami, United States

**Conference Dates :** March 12-13, 2018