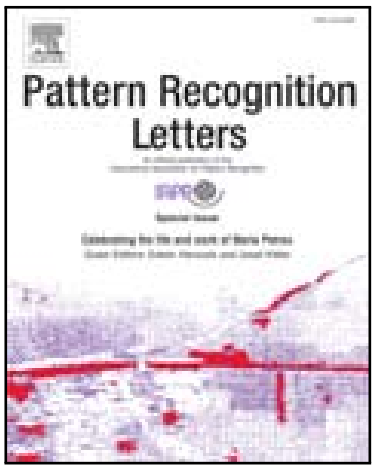

k-Means Clustering with Outlier Removal

Guojun Gan, Michael Kwok-Po Ng

PII: S0167-8655(17)30074-0
DOI: 10.1016/j.patrec.2017.03.008
Reference: PATREC 6763

To appear in: *Pattern Recognition Letters*

Received date: 5 July 2016
Revised date: 5 November 2016
Accepted date: 7 March 2017

Please cite this article as: Guojun Gan, Michael Kwok-Po Ng, k-Means Clustering with Outlier Removal, *Pattern Recognition Letters* (2017), doi: 10.1016/j.patrec.2017.03.008

Research Highlights (Required)

To create your highlights, please type the highlights against each `\item` command.

It should be short collection of bullet points that convey the core findings of the article. It should include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point.)

- We study the problem of data clustering with outlier detection.
- We propose a *k*-means-type algorithm by incorporating an additional "cluster" into the objective function.
- The algorithm is able to provide data clustering and outlier detection simultaneously.
- Outliers are not used in the cluster center calculation.
- Experiments on synthetic and real data show that the algorithm performs well.