

## Abstract

*In this final project, graphs approach theory is used to partitioning market data. First, market data is representated into a graphs which each item mapped into a vertices and each pairwise different item will be connected by an edge. Every pairwise item will be connected by an edge if the correlation between them is greater or equal with threshold value. The process of clustering is partitioning a graphs into some complete subgraphs which subgraphs is called clique. In every cliques in partition will be equal with a clusters.*

*The changing of threshold gives influence on the clustering result, because the value of threshold influence the correlation of pairwise data. The smaller of threshold value so number of data clusters will be smaller too, and number of item into one cluster will be greater.*

*From the process of clustering could get information about items that average sales fluctuation is not far a way. This information gives idea for take place that items.*

**Keywords:** *clique, clique partition, clustering, data mining, threshold*