Dynamic Bayes Network Approach to Market Basket Analysis

Bumsoo Kim[1]

[1] School of Business, George Washington University, USA

In this study, we consider utilizing DBN's to model different market basket problems. We propose approaches for learning and inference objectives, for both model parameters of a given structure and the dynamics of the structure itself. We use MCMC methods and use results from the DBN literature to devise learning algorithms in a time-series market basket data setting. We illustrate the implementation of proposed approach with low-dimensional problems and discuss their applications.