My Experience at Belk Summer Internship

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This summer I had the opportunity to work with the Business Intelligence Team in Belk IT. My work was focused around doing market basket analytics of the Belk Consumers. Market basket analysis helps retailers understand how customers are responding to promotions and what items tend to be bought together most frequently. It helps the retailer to make a better decision by studying the existing transaction data which reveals customers’ purchase patterns. It can impact Belk through analyzing promotion effectiveness, select products for limited time offers, help design floor plans for the stores, design catalogues and finally add to e-commerce i.e. Belk.com by suggesting frequently purchased bundles of products.

The primary focus of my work was to generate association rules from the transaction data over a period of time. Due to the large volume of data, we used the K-means clustering technique over a time series and then applied a frequently used data mining technique called the Apriori algorithm to generate association rules from each cluster. The goal is to find the products that drive the sales of other products so as to help support decisions regarding promotions using various features like support, confidence and lift. It was interesting to see what data can reveal and how it can sometimes produce counter intuitive results.

It was a great introduction to a practical application of data mining and was fascinating to see how data mining techniques can directly impact and help support in making business decisions. The exposure to a corporate environment added to the learning experience as well.
About me

- Sodetta Amnen
- PhD student at the University of Technology, UNSW
- Planning to specialise in Biostatistics
- Summer intern at progress into the workforce
- Supervised by Jeff Rodolfo & L. Seymour