

Joint Event on

9th International Conference on

Big Data Analysis and Data Mining

7th International Conference on

3D Printing Technology and Innovations

August 03, 2022

WEBINAR



Smaranya Dey

Target, India

Smaranya Dey, J Comput Sci Syst Biol 2022, Volume 15

Application of survival analysis in retail clearance space

Retail businesses across the globe must manage the flow of their inventory to serve their customers better and welcome new inventory as and when necessary to gain profit by satisfying the customer's needs. In this realm, the event of a clearance sale indicates the end of an item's lifecycle. It involves permanently removing the merchandise to create space for the newer incoming products. The clearance sales can be suitable for the consumers who are willing to buy the items of the retail chain or the various brands at a reduced price. However, it is different from the promotional sales activities, which are implemented on the popular items to achieve a higher turnover rate. The intent to organize a store-wide or a brand-wide clearance is to clear the items out of season, out of product ecosystem, or to introduce new items. Furthermore, the prices during the clearance periods are usually monotonically decreasing, unlike the promotions. The retailers must know the right time to send the items off for clearance, and with that goal in mind, this study explores the opportunity to use survival analysis to answer the following questions, what is the right time to put an item on clearance? Should an item even go to clearance if it is selling fast enough that price reduction might not be necessary? The survival analysis is a statistical technique where the outcome variable of interest is the time until a specific event occurs. Primarily used in researching the time of death of a patient with a severe ailment, time of experiencing cardiac arrest for a person with a history or time of component failure in manufacturing, can survival methods provide us with the answer for the appropriate time of item goes to clearance? For the problem statement of interest, this research will consider approaching the end of a product's lifecycle (out of fashion, out of season) like the event of interest. Not all the items within the product hierarchy will experience the event of interest, and the survival times will be unknown for a subset of the study group. The research uses models Kaplan-Meier estimates to figure out the time from the first indication of declining sales pattern to the time of death of the product. Additionally, the Cox (or proportional hazard) regression model comes into utilisation to investigate the effect of different variables upon the time clearance takes place. This research will also show the significant revenue gained upon correct detection of the clearance time.

Joint Event on

9th International Conference on

Big Data Analysis and Data Mining

7th International Conference on

3D Printing Technology and Innovations

August 03, 2022

WEBINAR

Biography

Smaranya is a Statistician by training, currently working as a Lead Data Scientist in the Digital Forecasting team at Target. She has 6.5 years of experience in Data Science and AI with focus on algorithmic product development using predictive modeling, decision intelligence, and machine learning-based techniques, maintain and upgrade the algorithms to answer the business needs.

Received: May 12, 2022; **Accepted:** May 14, 2022; **Published:** August 03, 2022
