Connected Devices, AI, and Intelligent Platforms: Drivers of the Evolution of Customer Intelligence

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Technological advances are increasing the connections between companies, customers and products, as well as among customers themselves. Consumers' use of connected devices is providing rich sources of data about consumers, their activity and their environment, which we label customer intelligence. At the same time, changes in statistical algorithms and artificial intelligence are making automated inferences and decisions regarding consumer behavior possible. One likely result of these changes is the emergence of companies that are especially adept at generating and using customer intelligence. This paper explores how changes in sensing technology, causal modeling, and intelligent marketing platforms may impact the generation and utilization of customer intelligence. We envision a merging of these traditionally separate activities in companies that possess a large, active customer base and the ability to collect, process and apply data from these customers quickly and accurately. Such a convergence offers substantial potential value, but also notable risk for tomorrow's connected consumers.

Recommendations System Based on Collaborative Filtering

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The leading position in the market of Amazon and Netflix have brought the topic of recommendation systems to the frontline, making it one of the most successful and influential applications of data mining. In this article we describe the use of collaborative filtering (CF) for personalization of products and services to consumers and for supporting cross-selling decisions. In particular, we discuss two main methods: The K-Nearest method and the K-Means method. Another method is Association Rules which is applicable to consumers who have made only one or two purchases in the past. We also briefly review the Matrix Factorization method which is used for making recommendations based on users' rankings of products. In addition, we present research results, based on real data, showing that CF-based recommendations yield purchase recommendations with higher matching rates than random recommendations. We conclude the paper by discussing potential applications of CF methods in various areas.