CMPE 272: Big Data Team Assignment

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What is the industry/domain?

Dataium, an information tracking firm, is the largest aggregator of online auto shopper behaviour. It analyzes and sells the business intelligence and statistics to its customer by tracking consumer preferences and behavior in the automotive industry.

Dataium collects data of about 20 million consumers monthly, across 10,000 automotive websites. Based on this historical data and real time consumer shopping behaviour it develops a knowledge based models which are then used for predicting future sale patterns. It uses its *Cloud Intelligence* platform to predict sales and provide effective solutions to its customers for advertisements, increase their sales, lower costs and retain their customers.

What business problem they try to solve with this technology?

1. How it collects data?

   Automotive website (Customer's or Dataium) install code on their websites which help Dataium to log all activities of individual visitor on that website[1].

   According to Dataium's Policy, they use cookies and other technologies to collect data for their research and analysis. The data collected from the visitor can be
   - visitor's personal details like contact number, email address, mailing address etc.
   - visitor's occupational details or business details.
   - mouse clicks, keystrokes, pages visited, time spent on parts of websites etc.

   Along with the consumers/visitors data collected using cookies they also consider impact of events such as super bowl or Thanksgiving sales, natural hazards such as hurricane Sandy on the sales[2].

2. Solutions they provide using the collected data :

   - Automotive Shopping Intensity (ASI) Index : They analyze the data collected to get ASI for various brands, makes and models and their trends[3].
   - Advertising Effectiveness: They determine the influence of advertisements on the

shopping behavior of the user. This influence is calculated on a regional or national level.

- They help buyers or consumers to formulate opinion on what to buy, from where to buy and how much to pay for the car based on their preferences. This saves users time as they get this information before physically going to the dealers.

What are the takeaway points that you might implement in your class project?

1. Try to get a large amount of data (past and present) to improve accuracy of analysis.
2. Consider factors like events, advertisements, weather and others which may have affected the past sales to predict the future sales.
3. Develop a system similar to Automotive Shopping Intensity (ASI) Index which will analyze data for various types and brands of organic foods.
4. Develop a predictive system in R to predict future sales and market size of all kinds of organic food.

References:

[1] http://www.dataium.com/policy/
[2] http://www.dataium.com/library/
[3] http://www.dataium.com/consulting/