IBM-NALAIYA THIRAN

(GLOBAL SALES DATA ANALYTICS)

LITERATURE SURVEY

Team No : 11

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LITERATURE SURVEY

1.TITLE: "Analytics-driven solutions for customer targeting and salesforce allocation".

AUTHORS: R. Lawrence C. Perl ich

JOURNAL NAME AND YEAR: IBM Systems Journal 2007

DESCRIPTION: Sales professionals need to identify newsales prospects, and sales executives need to deploy the sales force against the sales accounts with the best potential for future revenue. We describe two analytics-based solutions developed within IBM to address these related issues. The Web-based tool On TARGET provides a set of analytical models to identify new sales opportunities at existing client accounts and noncustomer companies. The models estimate the probability of purchase at the product-brand level. They use training examples drawn from historical transactions and extract explanatory features from transactional data joined with company firmographic data (e.g., revenue and number of employees)

LIMITATION: Sales reps have a hard time developing product or market specialization (unless the organization commits to specialized sales force allocated by geography).

2.TITLE: "Research on product sales forecast based on online search behaviour".

AUTHORS: Zhonghua Jiang, Zhiyi Wu.

JOURNAL NAME AND YEAR: 2021 IEEE (IAEAC).

DESCRIPTION: The search behaviour of Internet users is closely related to the needs of users, which is very important for the decision-making of enterprises. Based on the online search behaviour, It makes an empirical study on the prediction of product sales, and establishes a model to reflect customer willingness. The findings show that there is a positive correlation between keyword search frequency and product sales.

LIMITATION: Territory sizing can be challenge, resulting in uneven revenue/opportunity across geographies.

3. TITLE: "Walmart's Sales Data Analysis".

AUTHORS: Manpreet Singh, Barwick Ghouta.

JOURNAL NAME AND YEAR: 2017 4th Asia-Pacific World Congress on Computer Science and Engineering

DESCRIPTION: Information technology in this 21st century is reaching the skies with large-scale of data to be processed and studied to make sense of data where the traditional approach is no more effective. Now, retailers need a 360-degree view of their consumers, without which, they can miss competitive edge of the market. Retailers have to create effective promotions and offers to meet its sales and marketing goals, otherwise they will forgo the major opportunities that the current market offers. Many times it is hard for the retailers to comprehend the market condition since their retail stores are at various geographical locations.

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4. TITLE: "Sales Prediction with Social Media Analysis".

AUTHORS: Hyung-Il Ahn, W. Scott Spangler.

JOURNAL NAME AND YEAR: 2014 Annual SRII Global.

DESCRIPTION: Social media has been valuable sources to predict the future outcomes of some events such as box-office movie revenues or political elections. It focuses on periodic forecasting problems of product sales based on social media analysis and time-series analysis. In particular, we present a predictive model of monthly automobile sales using sentiment and topical keyword frequencies related to the target brand over time on social media.

LIMITATION: One of the biggest negatives of social media analysis is the security and privacy-related issues.

5.TITLE: "Using Enterprise Systems to Enhance Sales and Services Agility in Manufacturing Firms".

AUTHORS: Sanjay Mahtani.

JOURNAL NAME AND YEAR:2018 5th Asia-Pacific World Congress on Computer Science and Engineering (APWC on CSE).

DESCRIPTION: To manage customer ordering and sales services efficiently, sales forecasting and operations planning as well as order intake and return material authorization processes must be responsive and nimble in an enterprise. Organizations have implemented enterprise systems (ESs) to integrate their supply chain operations such as receipt of customer orders, planning of production and shipping of goods. It evaluates the management of sales and customer service processes in manufacturing firms using an ES and its information. Three case studies are conducted in manufacturing companies that have implemented ESs to examine how these systems support the management practices and strategies in sales and service operations.

LIMITATION: Though firms are sometimes constrained in materials supply with inability to procure parts timely, the underlying ES technology provides the analytical and knowledge-leveraging support in managing their sales and customer service processes efficiently.

6.TITLE: "Sales Forecasting Based on Cat Boost".

AUTHORS: Jingyi Ding, Ziqing Chen.

JOURNAL NAME AND YEAR: 2020 2nd International Conference on Information Technology and Computer Application (ITCA).

DESCRIPTION: Sales forecasting is a vital technology nowadays in the retail industry. With the help of advanced machine learning and deep learning algorithms, business owners can accurately predict the sales of thousands of products and make optimum decisions based on them. It proposed a sales forecasting system based on Cat Boosting. The algorithm is trained on the Walmart sales dataset, by far the largest dataset in this field. We performed effective feature engineering to boost prediction accuracy and speed.

LIMITATION: The challenge for company marketing and sales reps in preparing forecasting is that internal bias is hard to avoid. Sales reps look better and tend to earn more commission when they achieve high sales Goals.