CarrefourSA Is Shining Out With Campaign Communication Leveraging Advanced Analytics

PROJECT DURATION: 4.5 MONTHS

PROJECT NAME: CarrefourSA Smart Campaign Communication Management with Optimization

PROJECT DESCRIPTION: Design and implementation of an application which produces personalized communication text for CarrefourSA customers. These personalized texts inform customers about the current promotions which are most likely fit their individual needs. The machine learning and optimization algorithms behind the application help achieve an increase in the number of store visits of the customers and the total turnover generated.

PROJECT TARGET: Increasing the satisfaction of content-sensitive and willing customers who receive campaign messages, through increasing the communication effect of the campaign and thus making the customers shop more frequently and enjoy it even more.

RESULT: The project has provided an innovative tool that generates automatic texts that are data based with predictive and heuristic algorithms, and can be sent to the customers via messages if desired. Thanks to this tool, CarrefourSA aims to increase its annual turnover by at least TRY 20 Million. Example results: In August 2020, weekly communications generated TRY 700k additional turnover.

TECHNOLOGY AND SOLUTION: Multiple technologies were used in the created solution: Hana SQL, Microsoft SQL Server, Python and .NET Core. The solution is based on a statistical model that estimates the probability of purchasing the current campaign products in future purchases using the information of the products purchased in the past.

Sabancı Holding and Carrefour subsidiary CarrefourSA launched an Advanced Data Analytics and Optimization project with SabancıDx with the aim of personalizing the campaigns it offers to its customers. The primary goal of the project which lasted 4.5 months was to increase the satisfaction of content-sensitive and willing customers who receive campaign messages, through increasing the communication effect of the campaign and thus making the customers shop more frequently and enjoy it even more.

As a result of the project, CarrefourSA customers were being informed about the campaigns prepared by the promotion and category teams, via text messages, in a way that the campaign that would attract their attention the most would be communicated to each customer. Therefore, a machine learning and decision optimization application was designed in order to achieve an increase in the customers' store visit numbers and the total turnover to be generated.

SabancıDx Advanced Data Analytics Deputy General Manager Attila Bayrak emphasized that data analytics is now a necessity of the current business world, and said that the project realized with CarrefourSA is a concrete indicator of how to make a difference by using simple and unnecessary data piles. Bayrak stated that, thanks to SabancıDx's know-how and analytical team consisting of more than 40 experienced experts, they developed all activities [analysis, modeling, software and database design, application) internally except for the front-end design, and emphasized that it enabled the solution and application development time to be shortened remarkably.

Attila Bayrak also said that with the academic cooperation with Sabancı University, rapid progress has been made in determining the right solution methodology.

Using machine learning and advanced data analytics, we have significantly increased the campaign communication effect. Now our customers receive personalized messages including campaigns that they will regard as "good campaigns". This development significantly increased the turnover per contacted person, while increasing the frequency of customer shopping in the long run.

BİLAL GENÇ
Carrefoursa, Assistant General Manager Information Technology & CRM

ADDITIONAL TURNOVER INCREASE PER COSTUMER WITH TEXT MESSAGE (TRY)

1-1,25

ADDITIONAL TURNOVER INCREASE WITH ONE MESSAGE [TRY]

350.000

ANNUAL ADDITIONAL TURNOVER TARGET [TRY]

+20 Million

Personalized communication texts with artificial intelligence

Thanks to the machine learning and optimization model created by SabancıDx, personalized campaign communication texts are dynamically prepared in accordance with the campaign information in a daily language, while making use of past matches and offering suggestions to the user. Given a set of campaigns and customer base, communication texts including the campaigns that interest them the most are dynamically generated for each customer, and after working on multiple scenarios with different parameters, examining the results, the desired scenario results are sent as text messages, emails or push notifications. This way, a solution and value proposition that can create a significant increase in turnover is put forward.

Substantial increase in productivity

It takes an average of 1 day to 25 days for 1 person to produce between 200 and 5000 different text messages that are currently created. Thanks to the project in question, when the short messages sent to all customers are created and sent with the tool generated by this project, the time spent to create mass text messages [selecting the most effective ones from all campaigns] and sending these messages (contacting the text message sender company) has been reduced to the time spent only to load the mass and campaign files to the tool.