



Text Analytics

**Identify social media followers' interests to deliver targeted offers**

## The Big Picture

A leading loyalty analytics company wanted to identify the personality traits of ~64K of its loyalty shoppers based on their Twitter feeds. This uncovered a few challenges that needed to be examined before creating a solution. Out of the total number of Twitter followers, only 5K were identified in the company's user base. In addition, auras that accurately and comprehensively represented personality segments needed to be built. Lastly, Twitter is noisy, full of abbreviations, emoticons, and non-descriptive text which made sifting through the data a challenge.

## Transformative Solution

To start, auras of personality segments were constructed using an initial taxonomy/dictionary. This was enhanced through additional sources (lexical resources and pre-trained neural network word embeddings). Then, text from Twitter streams was extracted using Kafka in real time, and dCrypt was run for text cleaning and preprocessing. Key phrases were then extracted using unsupervised methods, and the similarity score to the personality segments was calculated by distance measures (such as cosine similarity). Lastly, DBPedia was leveraged to find the relatedness of terms to personality segments.

This technique successfully identified the personality traits of the loyalty shoppers. Out of 60K social media followers, traits could be identified for 3K (5%) of them. Movies and music were recognized as top interests of followers of its company page.

## The Change

As a result, this information is being used by the company for targeted marketing. The analysis offers the opportunity for the data to be extended to other social media pages. Also, the specific followers identified can be targeted with relevant offers using their social media handle.

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