Sensometrics in L'Oréal R&I: from gentle supporter to connected and innovative actor

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Abstract
This talk presents some testimonials of how the sensometric science evolves inside L'Oréal Research & Innovation (R&I) and how this evolution could be valuable into the product evaluation context.

Keywords: Product evaluation, Sensometrics, Innovation, Prediction, Data scientist.

1. Introduction

The L'Oréal strategy is to provide a cosmetic offer for all. To achieve this ambition, L'Oréal R&I must deliver innovative products. Product evaluation assisted by sensometric science is key actor in the innovation process to make good decisions concerning consumer, sensory and expert tests. The sensometric discipline is traditionally based on sensory, data management and statistics but things are moving on. New skills emerge in this field and could be valuable in improving the product evaluation process.

With three examples, the aim of this talk is to illustrate how the sensometric science evolved with new missions towards product evaluation teams.

2. Example1: "How to deal with data?"

In partnership with product evaluation, Sensometrics participates in the protocol harmonization in order to gather standardized data in the same structured databases. Thus, it should be able to deal with IT expertise; for example, to connect databases to analytic systems. This can vary from small to large databases. The main goal is to give added value to the gold mine of data generated by the product evaluation and to facilitate better decision making (using automatic reports, meta-analysis…).

3. Example 2: “How to improve evaluation?”

The aim of the predictive evaluation program is to be able to predict the consumer needs/benefits as soon as possible in the evaluation process. This project is based on complementary expertise like consumer, instrumental, sensory, expert and of course sensometrics.

Sensometric science must deal here with statistics and modelling. The attention is mainly focused on efficacy and robustness. Machine learning methods are used to find the more appropriate model/method but at the end the result should be relevant and understandable. Thus, sensory and consumer knowledge are also important to have in mind.

4. Example 3: “How to better focus on consumers?”

For better understand the needs of consumers and thus develop products more in line with the consumer, L’Oréal R&I was interested in collecting customer reviews from the web, which are a type of unstructured data. Consumer reviews have been analyzed using text mining technics in order to rate and classify a cosmetic product, to compare the performance of a L’Oréal product to a competitor’s product or to highlight drivers of liking in a dedicated universe.

Sensometric science requires, in such project, data science skills (mathematics, data processing…).

5. Conclusions

In addition to master the sensory and statistical skills and in a current digital context, sensometric science has to deal with other domains on the border of its discipline like data processing, data sciences, data mining... The new sensometrician should be a Sensory Data Scientist to play an even more important role in the future.

More and more, sensometric science has a central role to play in each step of the product evaluation process. This science could help sensory researchers to bring added value from internal data, to go faster and make better evaluation tests and to be more focused on consumer final needs.