

The data science machine: a new turn for predictive marketing?

By [Amandine Robin](#)

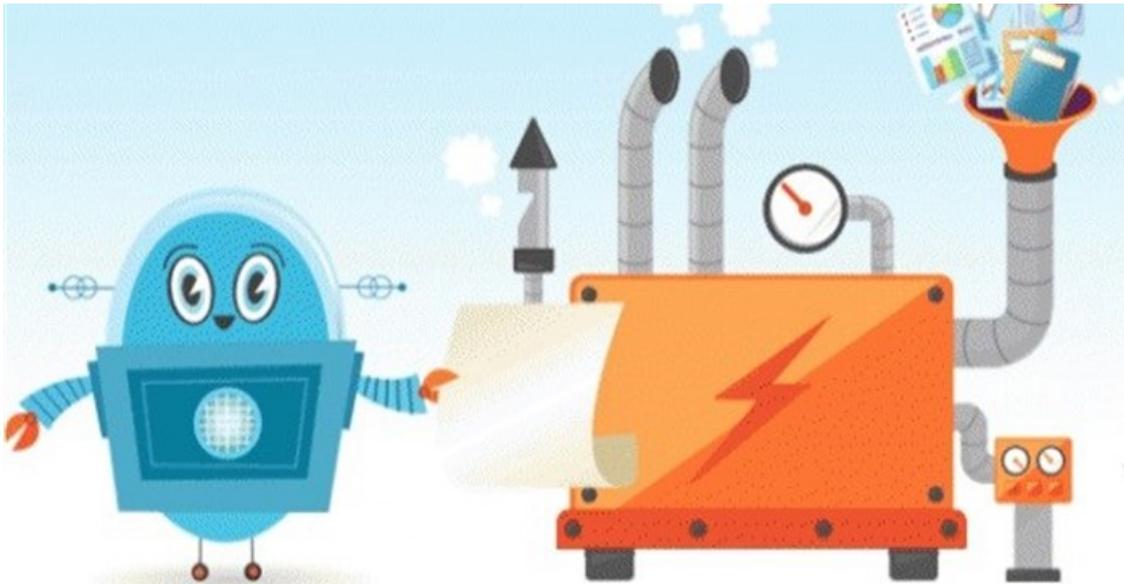
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Predictive marketing could have a new powerful tool, available soon for massive analysis.

An algorithm capable of extracting features and predicting human behaviour almost as well as human intelligence but without any human intervention.

In general, human intervention is required to complement Artificial Intelligence: advanced informatics analyses big data volumes provided that human intelligence fixes or adjusts parameters, and human beings are then required to also analyse and interpret results. Now, the creation of the data science machine demonstrates a turning point in data science.

Developed by Kanter and Kalyan Veeramachaneni, both researchers from MIT, the [data science machine](#) was just introduced to its peers during the International Conference on Data Science and Advanced Analytics held in Paris from 29 to 31 October 2015.



The data science machine... © http://www.csail.mit.edu/data_science_machine

The machine is able to achieve the unprecedented performance of deriving predictive models from raw data automatically. First, the system generates features automatically from relational datasets. Second, it finds the optimal parameters to build predictive models. The fact that the complete process is autotuned and optimised without human involvement makes it the first of its kind.

Tested against teams composed of human beings, the automated data-analysis system outperformed 615 out of 906 human teams. In other words, it crunches numbers faster and more effectively than most humans do. However, this doesn't mean that it will replace human intelligence. As the authors claim: "It has a role alongside data scientists. Currently, data scientists are very involved in the feature generation and selection processes. Our results show that the data science machine can automatically create features of value and figure out how to use those features in creating a model... The machine's success-to-effort ratio suggests there is a place for it in data science."

As Max Kanter explains on the MIT's website: "There's so much data out there to be analysed. And right now it's just sitting there, not doing anything. So maybe we can come up with a solution that will at least get us started on it, at least get us moving." Between the lines, it opens the way to the analysis of massive data volumes at a drastically reduced cost.

Brands and automation marketing experts can then benefit from a tool allowing them to know the consumer even better and to conceive campaigns and products accordingly, by anticipating future behaviours. "This is going to become the standard quickly", says Margo Seltzer, a professor of computer science at Harvard University, who was not involved in the work.

ABOUT AMANDINE ROBIN

Amandine Robin is a design thinker. She co-founded Innovative Matters, a strategic innovation lab with Dora Jurd in 2014. Innovative Matters is dedicated to designing innovative concepts and building consistent brand experiences.

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