FT FINANCIAL TIMES

October 21, 2014 9:00 pm

Analytic programs can learn to make accurate predictions

Michael Dempsey

Businesses these days are not short of data. However, making sense of the mountain of facts contained in large corporate applications remains a challenge, which is where data analytics comes in.

Analytic tools can scan millions of pieces of information and pin down very practical lessons for companies. The rate at which a discount on a particular line in a specific location will make sales climb and then tail off is typical of the questions data analysis has to answer.

So-called “machine learning” allows the software to come up with its own set of “rules”, directions the software can follow when a similar stocking problem arises.
For example, executives can assess and approve the rules so the software can be allowed to follow a particular avenue when stocks of a popular brand are running low during a sales promotion. These are flagged up in plain language for executives to assess and approve. Once activated, the rules can run forecasts on the likely impact of a given sales promotion on stock levels in warehouses and across the shelves of stores.

Jeff Bodenstab, a vice-president at Dutch software house ToolsGroup, says machine learning programs can quickly interpret large volumes of data to measure the accuracy of sales forecasts or logistics plans. Mr Bodenstab says the big breakthrough in recent years has been in producing software that can deal with the incomplete data that inevitably come from busy shop-floors. “With machine learning, we can see through the ‘noise’, use all the data that don’t add up.”

The ability to translate columns of numbers that would have been previously buried inside spreadsheets into simple visual images boosts the effectiveness of data analysis. These images are presented using colour-coded symbols such as traffic lights to represent the success or failure of a service.

ToolsGroup customer Granarolo, an Italian dairy products company, uses data analysis to help juggle the shelf-life of many of its products. For instance fresh milk lasts for six days while the company's yoghurt has 40 days to sit in the supermarket.
Seasonal taste adds to the complexity of shipping products across Europe, with items such as mozzarella cheese selling better in summer. Another factor is that 60 per cent of Granarolo's products are sold via promotions and discounts. The consumer response to each of these deals has to be carefully calculated by the Bologna-based company.
Granarolo, applying past experience of how well promotions have worked in different outlets, uses the machine learning program to generate suggested stock levels. These predictions rely on data from 60,000 sites across Europe.

Data analysis has replaced spreadsheet-based work and produces accurate forecasts that cover Granarolo's 200 best-selling lines in great detail. Sales of lines such as fresh milk are being forecast with 98 per cent accuracy, meaning stock levels are almost precisely aligned to meet demand.