Why AI could boost South Africa's battered retail sector

By Vian Chinner   9 Jul 2019

Body language reveals a lot about what is going on in a person's mind. Crossed arms could be a sign defensiveness, clasping your hands behind your back is said to indicate anger or apprehension, while humans apparently pull their ear lobes when they are indecisive.

Soon your local supermarket could monitor your body language in a bid to boost sales. The technology, which is still in its early days, works as follows: In-store cameras detect shoppers' facial expressions, which can reveal if they think a product is too expensive or if they are unimpressed with its specifications. Based on this information, retailers can then adjust their pricing or stock a different brand.

These technologies are called 'emotion artificial intelligence (AI)', a subset of AI, which is a term used to describe machines that mimic human cognitive functions, such as learning and problem-solving. Similar technology also allows retailers to track how a shopper navigates through a store, monitoring which shelves they stop at and which relevant products they've missed. Stores can thereby be organised more optimally.

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Ripe for AI disruption

From robotic shop assistants to personalised marketing campaigns, modern AI could soon impact all spheres of the retail industry. Consultancy firm Accenture highlights areas such as customer engagement, merchandising and back-office support as particularly ripe for AI disruption.

South Africa's brick and mortar retail industry, too, can implement AI solutions to maximise efficiency and customer satisfaction. Our retailers operate in a particularly demanding environment, characterised by lacklustre economic growth, cash-strapped consumers, changing shopping habits and strong competition from agile global competitors.

In a recent report, property services group Broll says the weak consumer environment has resulted in several retail brands going into business rescue (Hamleys), while others had to close their doors (Stuttafords and Nine West).

The sector's health is important to the broader South African economy. Not only are retailers significant employers, but they are also interlinked with other industries such as real estate development and consumer goods manufacturing. Technological innovations that could improve the performance of our retailers should, therefore, be welcomed.
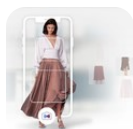
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Data-based decision-making

While emotion AI technology might be a step too far for most South African retailers at this stage, there are simpler modern AI solutions that can improve their profitability. By utilising retailers' transaction data, AI algorithms can predict who will buy which product at what price. Retail stores collect vast amounts of data but it is difficult for human brains to identify patterns amidst so much information.

One way how AI can assist retailers is in terms of carrying the right products to satisfy their customers and maximise revenues. In fashion retail, where tastes are highly subjective, consistently having enticing garments in store is a particular challenge. While most fashion retailers already use past sales data to determine which garments or styles to stock, there are myriad other factors that could influence future sales, including the garment's colour, size or fabric, local weather, store location, Instagram trends, etc.

Human brains cannot process all these variables to make accurate predictions. There is also a tendency to focus on the most popular products, whereby retailers wrongly assume each person is the average of the collective. By rather stocking their outlets with the most relevant products, which takes into account the nuances of each shopper's buying behaviour, as opposed to being overly influenced by the previous season's top sellers, retailers can squeeze out a considerable amount of extra revenue.

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With AI-powered decision making, shopkeepers can also manage their inventories more efficiently. Too much stock is a drag on the balance sheet while too little might result in missed sales. Human assumptions of how fast products will sell often

don't take all the data into consideration.

For instance, a product which flies off the shelves in George, might struggle in a similar-sized store in Pietermaritzburg. The reasons for such as discrepancy might not be obvious, but AI algorithms can predict it. According to Accenture, global retailers are already seizing AI's ability to ensure the right variety of product is available through the right channels.

South Africa's weak economy is arguably the biggest challenge facing retailers. With GDP growth struggling to keep up with the birthrate, consumers are essentially becoming poorer. It is therefore vital for stores to price their products in the most profitable way. Here, too, algorithmic decision-making can lend a helping hand.

To illustrate: a building supplies retailer might offer large discounts to contractors, while everyday DIY enthusiasts pay full price. In essence, the smaller customers subsidise the bigger ones. However, AI might reveal that the large account customers are not as price sensitive as previously thought and would remain loyal to the retailer even without the generous discounts. By pricing its products more equally, the retailer could boost sales from smaller customers, while not losing business from the contractors.

Real business benefits

Despite the promise it holds, implementing AI solutions could be a daunting task for any retail executive. A good starting point would be to automate decisions that are repeated often. And because AI is relatively costly, retailers should target areas where it could have a material financial impact. A R1-million saving or revenue lift is probably not going to be worth their while, but a R50-million problem is well suited for AI.

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AI, machine learning and the Fourth Industrial Revolution have become buzzwords that leave most people more confused than empowered. South African retailers, however, need to separate the hype from the real business benefits these technologies can offer.

As Accenture says: "Retailers must seek opportunities to deploy AI inside their organisations and across the extended retail value chain. Customer engagement is a good place to start. Plenty of solutions already exist, and new advances soon will enable retailers to leapfrog their competitors. Merchandising, pricing, promotion, inventory placement, labour management and myriad back-office applications also hold great potential."

By not considering the benefits of AI, South African retailers risk leaving money on the table.

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