



# AI in retail: Evolution not revolution, DataArt

We should not expect an AI in retail revolution, but rather a gradual evolution during which retailers adopt the techniques of machine learning and deep learning to reduce expenses and increase sales by improving personalisation for customers. That's the view of Igor Kaufman, AI Technology Consultant at technology consultancy DataArt.

There will be more routine task optimisation with consistent increase in precision such as check-outs without cashiers, and fully-automated warehouses that require less space, work efficiently and therefore faster and require fewer employees. In bricks and mortar stores, companies will use GPU-powered robots powered by computer vision to track stock and will use Natural Language Processing (NLP) techniques to help customers with navigation.

“In terms of personalisation, retailers continue to collect more and more information about their customers: from a customer's habits, a predictive profile based on browsing history, sociological portrait, geo, and dozens of other parameters that could be retrieved from social networks, purchase history, third party data suppliers and so on. All this leads to better predictions to recommend products,” says Kaufman.

We will also see AR as the next step for trying on clothes. Shoppers will be able to see a digital mirror with suggestions regarding style, size, potential accessories and the final look. This will be based not on a generic mannequin, but on the client's own body. 3D printing could also be considered as a potential direction for growth. How convenient would it be if the client could print a pair of sneakers based on a foot scan made instantaneously in the store? Taking customer feedback into account, the optimal form of the sole would be determined through machine learning.

“Overall, we can expect exciting retail tech startups and solutions to reach the market in the next few years as the technology matures and retailers look to remain competitive and innovative,” Kaufman states.

In terms of the most innovative retailers, he believes that it's hard to compete with the \$23 billion Amazon spent on R&D in 2017. With an enormous mass of data, the e-commerce giant is not only becoming a leader in innovation in offline retail with Amazon Go, but is also maximising the benefits of robotics to speed up and reduce the error rate in its warehouses. Amazon is also able to maintain its leadership position in sales forecasting, leveraging the data to estimate how much to spend on promotions and how that activity will directly convert to sales. Using an AI-based recommendation engine for up to 35% of sales, it is also able to enhance consumer insights.

That said, there are numerous other examples of applying AI to add more value for the client and generate more revenue as a result. John Lewis, in partnership with Cortextica, has introduced a 'Shazam for clothes' solution in its mobile app, which allows the customer to take a photo of the product that will be automatically recognised and similar options presented. American Eagle Outfitters, meanwhile, has implemented a similar solution that suggests accessories that might be a good fit for an article of clothing the customer purchased. And Shop Direct is experimenting with A/B testing on a much higher level. It is generating about 1.2 mln variations of the homepage of Very to tailor the view to each customer and it constantly improves outcomes using deep learning.

We have also seen a new breed of semi-intelligent robots designed specifically to work in harmony with fellow human employees, assisting customers and staff. The OSHBot, designed by startup, Fellow Robots, as a 'moving kiosk' as opposed to a human replacement, is already used in tool shops to help users find a screwdriver, scan shelves to find products, and make trips to the compost bins. Another startup, Savioke, has built Dash, which caters to the hotel industry assisting staff with guests' deliveries from bottles of water to tooth paste, using voice processing, image recognition and indoor navigation techniques.

Original article can be found here:

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