



Effect of Artificial Intelligence (AI) on retail business

SHAILENDRASINH DILAVARSINH THAKOR
Bakrol Ta. Kalol Dist. Panchmahal 389330

1. Introduction

Artificial Intelligence is more than a subject for fiction films and books; It is a very serious area of research within Computer Science. This area has existed, in some form or another, since the first digital computer was created and has not stopped progressing since then. Now, in the present time, we see more and more news that mention AI or every time we see more products or apps that apparently use AI. Many algorithms are being used for Product Information to sell extra items to customers, however, the technology to develop personalization in merchandising and ecommerce is growing even more rapidly.

2. Definition of Artificial Intelligence

The term artificial intelligence was coined in 1950s. This was after the US department of Defence Advanced research Projects Agency(DARPA) took interest in this type of technology. They first started to train machines to mimic basic human reasoning and problem solving and have since then developed machines that are able to perform more intricate tasks.

In order for a system to be described as an artificial intelligence system it as to demonstrate human behaviours such as planning, learning, reasoning. Problem solving. Knowledge. Representation, perception, motion and manipulation. This can be differentiated into two sectors; narrow AI and general AI. Narrow AI means that the machine can only perform one task at a time. General AI means that machines can attempt to think and function as the human mind.

Although Artificial Intelligence is mostly known for its robotic usage, today's artificial intelligence has a high demand in different job sectors such as health care, retail, manufacturing and sports.

3. Use A.I. in Merchandising and Product Information

For instance, an algorithm functioning pretty straight forward is the 'most popular' filter. This filter is continuously changing depending on which products are the most popular, and this thanks to AI. 5 main settings of this algorithm can be controlled, optimized and also automated.

1. Deciding on popular products over a defined time period.
2. What is the unit used to define popularity? Is it number of sales to customers, number of sold units, and number of views?
3. Type of filter applied to determine product set.
4. Visitors' behaviour on website and on 'most popular' filter.
5. What types of product information to promote when making the 'most popular' list.

4. Future of AI and merchandising

At the moment, predictive machine-learning is being used successfully in several markets, including financial ones. A.I. is being used in marketing automations, and these two trends are facing the same issues when it comes to retailers, i.e. a lot of information but not enough people and time to act intelligently or instantly on it.

With computers becoming the main dominant force of retail, it is believed that in five years' time more than 90% of the virtual shopping experience will be automated by computers using AI-powered ecommerce optimization.

5. Use of Artificial Intelligence in Business

In terms of business and Artificial Intelligence, probably the first thing we think about are the tech giants such as Google, Facebook or Microsoft.

Although the position of these companies in their domain in the use and development of new methods of AI is evident, there are many basic methods and knowledge that any company, even small ones, can start using to get the most out of their data.

Now, it is important to make a distinction, since there are business areas dedicated to extracting value from data, areas such as Business Intelligence and Data Analysis (or Data Science, or Data Mining) focus precisely on that, and have already existed for years.

The main difference between these areas and Machine Learning is that, while those areas analyse data to deliver forecasts or graphs as a report, Machine Learning processes data with a predefined business objective to make automated business decisions.

While a data analysis allows you to know your results and make forecasts for the management of a business, a Machine Learning algorithm allows you to automate a process and make it part of the system, or even use that automated intelligence to improve your product or service.

According to the world's leading research and advisory company, Gartner, it was predicted that by 2020, 85% of interactions between costumers and retailers will happen without human interaction.

For many companies that wish to remain relevant in the industry, innovation is the answer. With artificial intelligence being one of the leading innovations in the industry there is no surprise that this technology is rapidly taking over the ecommerce industry. Below you will find three ways how Artificial Intelligence can be used in ecommerce.

6. How to start using AI today in your business

Now that we already know what Machine Learning is, and how it differs from other business areas, it's time to see some practical applications.

I will share 4 things that you can start doing today to use Artificial Intelligence in your business:

1. Make as many advertisements as possible
2. Use IFTTT (If This, Than That) tools
3. Learn what is "Linear Regression"
4. Learn how to use Excel's "Solver"

7. Conclusion

The innovation process and global competitiveness is strengthening as an outcome of the adoption of various strategies by the corporate firms (companies and start-ups) to become AI firms. The actual intention is to grow with the most advanced technology of AI and win the technological race. Our study uncovers the top automation and AI industries that will create more opportunities in near future viz. healthcare, cyber security, core AI, business intelligence and marketing & sales. The upward trajectory in the investment in automation and AI in the last 8 years clearly implies that it has the potential to change the economy. However, we can see that the AI is confined only to a few regions in the world creating an "AI divide". The further expansion of the technology in AI-enabled countries and nonparticipation of other countries will widen this divide. This divide, like the digital divide, would deepen the inequality in economic, cultural and social sectors; would create a chasm. We see this divide as the "dark side" to AI.

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