

A REVIEW OF THE PART MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE PLAY IN IMPROVING THE ONLINE SHOPPING EXPERIENCE

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Abstract - The scientific study of statistical models and algorithms used by computers to carry out specific tasks relies on patterns rather than explicit instructions, and is known as machine learning. It is thought of as a branch of artificial intelligence. E-commerce, often known as electronic or internet commerce, is the term used to describe the purchasing and selling of items through the internet, as well as the data and money transfers necessary to carry out such transactions. Technologies including electronic fund transfers, online transaction processing, Internet marketing, and automated data collection systems are drawn to electronic commerce. Customer satisfaction has improved as a result of taking into account and employing artificial intelligence concepts in product marketing, sales forecasting, and chatbots to deliver superior services at a reasonable cost. Machine learning promises to revolutionise aspects of e-commerce even more as it becomes more ingrained in our daily lives. This essay examines customer experience, search results, retargeting, the replacement of keyword research by visual discovery, product suggestions, and how customers perceive the accessibility of products in the context of online commerce.

Keywords - Chatbots, E-Commerce, Machine learning, User experience.

INTRODUCTION

Artificial Intelligence is a stream where a computer acts like a human. These days' computers are getting smarter and companies throughout the world are finding ways on how they can efficiently enhance customer experience through online services. In current trends when it comes to satisfying customers the business is not fighting the conventional battle but either are choosing a more digitized way. These days business have introduced Artificial Intelligence in their customer service department to a greater extent and the number will increase even more in future due to the increase in quality of communications with the customers. Here, we highlight the smart usage of e-mail, intelligent chatbots, the increased productivity due to usage of chatbots in e-commerce.

Artificial Intelligence offers the retailers to personalize each introduction with their customers, which in turn provides them with better experience. Through this the customer's service issue is reduced to a greater number.

An alternative method for the usage of keyword matching which generates very high search ranking based on relevance for that particular customer is possible due to artificial intelligence. Artificial Intelligence also helps analyze customer data from various channels, their behavior and purchasing pattern which helps in predicting what the customer actually wants. The retailers are also benefited in recognizing frauds in a large amount and get notified if something is wrong. The customer segmentation plays a significant role in E-Commerce as it helps their companies to adopt different communication strategies for distinct customers. These days' banks have numerous customer touch points which capture millions of customer experience which in turn help them to navigate better. They have recently introduced virtual employees who perform the same task repeatedly in a more significant and efficient manner, when compared to human employees. The significant usage of Artificial Intelligence in sales forecast helps analyze huge volumes of user data on the basis of which it offers useful buying patterns. Handling marketing budgets properly often need a complete expertise this become a huge burden for small businesses as it costs more, luckily these issues are solved due to Artificial Intelligence solutions which are meant for marketing. The usage of digital marketing platforms also plays a major role in marketing solutions.

CURRENT SCENARIO

Traditional commerce was much more prevalent in the past than electronic commerce. In traditional commerce, things are directly exchanged for money in a cash-based system. The transaction of goods and services between the retailer and the customer was observed to take place in person. Due to widespread e-commerce use in the early 20th century, which offered better advantages for quickly and easily purchasing products and services, this method lost popularity. E-commerce refers to the exchange of products and services via the internet. Online purchases are done using credit or debit cards, net banking, and other payment methods, and customers can also take advantage of promotional discounts. An online marketplace is known as e-commerce.

Milestones of E-Commerce:

The World Wide Web(WWW)

E-commerce wasn't as common back when there weren't web servers and browsers. Online purchasing increased as a result of the National Science Federation (NSF) promoting NET use later in 1991. Millions of domains were registered in a matter of years, and internet commerce skyrocketed in popularity. Amazon was established as an online bookshop with online transactions in 1995.

Payment gateways

Payment processing gained widespread popularity as PayPal and Square gave the sector a new brand. This was a major turning point for the then-emerging field of e-commerce. With the aid of encrypted and compiled data, payment gateways connected the merchant's website to the bank to fill up the card details. In 1998, it went worldwide.

Online reviews

RateltAll.com, Deja.com, and Epinions.com are three "review" websites that debuted in 1999. This was the first time that consumers have ever reviewed things online. In just six months, over a

million views had been recorded. Later, the bulk of internet retailers immediately incorporated this approach for customer evaluation. Customers and retailers benefited from this system in equal measure. The old "word of mouth" recommendations were far behind when compared to this strategy.

The popularity of smartphones

Apple introduced the iPhone in 2007, enabling users to access the internet and download and utilise apps from the iOS store. This made it possible for users to shop and launched many current mobile retail trends. With the advent of smartphones, users may now access the internet from their phone whenever and wherever they are. This has become a key advantage for mobile commerce to achieve enormous success in the e-commerce sector.

AR(Augmented Reality)

The most recent gift to humanity is augmented reality. On the most fundamental level, it makes things possible for both retailers and customers. Using the user's actual perspective of his environment, this technology creates computerised graphics. From the military to medical, it has a variety of uses. Customers may see their purchases at home thanks to AR displays that are available in-store.

"E-commerce is advancing as forcefully as the world's largest river, the Amazon; the river that, more than 30 years ago, transformed into a bookshop, the largest marketplace in the world, and then a city."

Impact

Mobile commerce

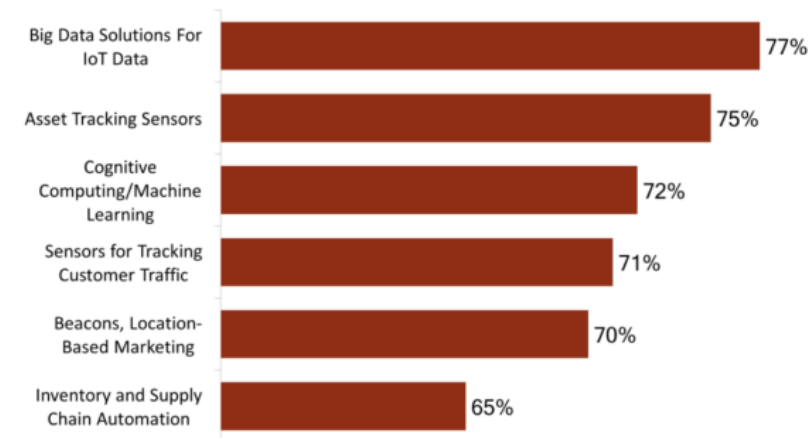
It deals with purchasing and selling products using wireless handheld devices like cellphones and personal digital assistants (PDAs). This sector is expanding more quickly than e-commerce, and by the end of 2018, it had accumulated almost 70% of all e-commerce traffic.

Artificial Intelligence

Due to their high price, artificial intelligence and machine learning have up until now been heavily utilised by multinational corporations. But by 2020, it is anticipated that about 80% of client services would be managed by AI.

Percentage Of Retailers Planning To Invest In AI And IoT Technologies By 2021

Global



n=1,700

Source: Zebra Technologies, 2017

BI INTELLIGENCE

Fig 1: percentage of retailers planning to invest in AI by 2021.

Augmented and virtual reality (AR/VR):

Technologies like AR and VR boost conversion rates and get rid of online shopping returns. These technologies are now in use by the cosmetics, apparel, and automotive industries, and it is predicted that by the end of 2020, augmented reality will have generated \$120 billion in revenue.

Machine Learning and the Customer Experience

Ecommerce companies may now offer more individualised consumer experiences thanks to machine learning. Customers now favour personal interactions with their favourite businesses and have learned to anticipate it from their purchasing experiences. Retailers can eliminate problems with customer service right at the source thanks to machine learning.

Machine Learning and Search Results

Sellers can benefit greatly from improving search results. Every time a customer spends online, machine learning can enhance the search results by taking their past purchases into consideration. Machine learning can produce a search score based on the pertinent terms used by that specific user, as opposed to strategies like keyword matching.

Artificial Intelligence and Retargeting

Artificial intelligence will be utilised to assess client behaviour in-store in addition to digital data as omni-channel technology develops. This enables marketers to give their most important clients top priority.

Artificial Intelligence and Product Recommendations

In order to boost conversion rates, machine learning can be used to recommend ecommerce products based on various purchasing methods. The algorithm can discover behaviour and

purchasing habits that may be used to forecast what customers truly desire by analysing customer data in a variety of ways.

Machine Learning Can Eliminate Fraud

Finding anomalies is made simpler as data volume increases. As a result, users can use machine learning to spot data changes, learn what is "normal" and what isn't, and receive alerts when something isn't right. Fraud detection would be the most widespread application for this. Customers who make significant purchases using stolen cards or cancel their payments after the goods have been delivered are a common problem for retailers.

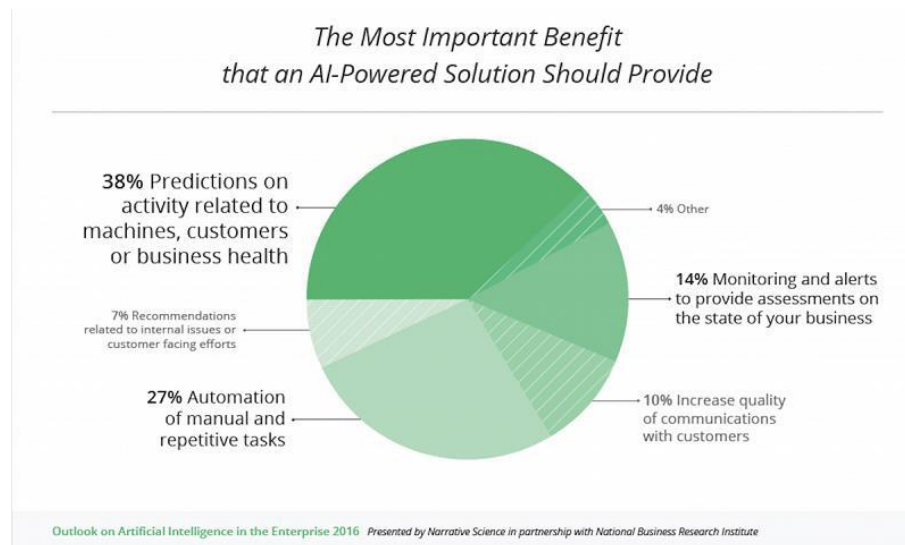


fig 2: prediction of future with the usage of artificial intelligence in customer experience

INTELLIGENT CHATBOOTS

A Chabot has significantly improved the customer experience by utilising artificial intelligence. Here are a few notable examples of how Chabot has improved customer service:

Personalization

Every time a customer visits a website or an online business, they expect personalization. It was challenging back then for human customer service agents, who did their best to make sure the consumer was satisfied. Businesses may provide their clients with experiences that are more tailored thanks to AI.

Fix problems before they occur

Before clients ever become aware of a problem, Chabot can remedy it. Bots are made to constantly anticipate consumers' needs and proactively develop a faultless experience for them.

Streamline the sales path

Making the purchasing experience enjoyable and advantageous is crucial whenever customers are prepared to make a purchase. A Chabot with improved AI can simplify the process and enhance the customer experience instead of live chat agents, who can occasionally make things more difficult. Smart Chabot offers excellent customer service for everything from health to insurance to fashion. Additionally, they have generally shown themselves to be superior to human representations. They are therefore more knowledgeable and intelligent than human customer service professionals.

WAY FORWARD

Personalization in e-commerce is nothing new. Deeper levels of personalisation are beginning to permeate the rapidly expanding e-commerce industry thanks to the ever-improving developments in artificial intelligence and machine learning technology. The multi-channel strategy is used for artificial intelligence-based personalisation in e-commerce. The firm may study how customers are interacting online with the use of new artificial intelligence engines like Boom train, which sit on top of the many customer touch points. Whether it's a website, a mobile application, or an email campaign, the AI engine is always keeping track of all devices and channels to develop a global consumer perspective. The ability to create a seamless customer experience across all platforms is provided by this unified customer view for e-commerce firms.

The best illustration is Alexa, Amazon's in-home assistant, who is perfectly equipped to give customers a contemporary shopping experience. The times when one had to run to the neighbourhood store because they were "out of milk" are long gone. Simply ask Alexa to place an order for some for the morning. The cutting-edge Alexa will utilise Amazon to place a purchase on the user's behalf, with delivery scheduled for the following morning. The fact that Alexa can complete an order by simply verifying the user's voice pattern is an intriguing capability.

With so many client touchpoints that record millions of interactions every day, large banks have a lot of ground to cover when it comes to customer experience. The Stockholm-based bank Nordea has dug deeply into the customer experience to identify positive spots and has used AI for optimum impact. The visitors can test out cosmetics like lipstick and eye shadows to match their skin tone at Sephora, a beauty brand that employs Chabot and also uses its visual artist product. With the aid of AI, a product can also be applied on a customer's face via an app after being identified by a facial feature. This uses augmented reality and virtual reality, which is undoubtedly a wonderful contribution from AI.

CONCLUSION

Especially in the area of customer care for online purchasing, artificial intelligence has impacted every part of company. If the business wants to stay one step ahead of its rivals, it needs to start making plans for how AI can help it improve its own customer service operation.

The difficulty is in figuring out how to develop the proper procedures and knowledge for gathering data and creating AI algorithms and models in order to benefit from them. This is where a highly developed AI-enabled customer journey analytics platform can assist in delivering high-impact customer experiences quickly and efficiently. As one can see, machine learning in e-commerce has a lot of fascinating potential applications. We can anticipate machine learning and artificial intelligence becoming a more significant component of successful online retail as many of these are either now in use or will be shortly.

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