AI and ML – Impact on E-commerce Industry

The term Artificial Intelligence (AI) and Machine Learning (ML) has been creating a vibe from the past few years. Though these terms may sound too intricate to understand, knowingly or unknowingly they have become part of life. Imagine around the year 1980 if someone had told you that you could be able to talk on wireless phones and you could give your requirements, and the cell phones would display you the best options suited for you related to hotels, clothes, or any other equipment's you think about. This has been made possible through AI by collaborating the data together and giving the best possible results.

What is AI and ML ?

AI is intelligence demonstrated by machines that is expected to work and respond like human intelligence. While ML is the subset of AI which focuses on the use of data and algorithms to imitate the way how humans learn and gradually improve their accuracy based on the results obtained.

The process in AI and ML includes learning, planning, and problem solving. The systems look for systematic patterns in data and make better decisions in future based on examples that are provided. The main objective is to let the system learn by themselves without much human intervention and assistance and adjust their output accordingly.

Statistical Data of AI and ML

The AI and ML technology has taken the e-commerce experience to a whole new level and has altered the individual's perspective for personalized shopping experiences. This has totally refined the success markets for e-commerce industry by providing value to the customer experience and generating a whole lot of revenue for the businesses. AI and ML help retailers make better future predictions about sales, provide better customer support, and target large audiences. E-commerce businesses around the world are using AI to achieve tedious tasks in a more intelligent way. From revolutionizing online purchases, warehouse management, to managing prices; AI has been used to increase overall profit margins. Here are some statistics showing how AI and ML has impacted the e-commerce sales worldwide.

- As per Statista, the revenue from retail e-commerce sales worldwide has amounted to **$2.4 trillion dollars**, which indicates that e-commerce is growing at the rate of **20%** every year.
- E-commerce through mobile has been a game changer growing at even more rapid rate. By 2018 it was recorded that it has accounted for over **70%** of the total e-commerce traffic.
- Gartner predicts by end of 2020; AI had managed around **80%** of all customer interactions.

The picture below shows the overall impact that AI and ML has had and will have on the retail e-commerce sales worldwide.
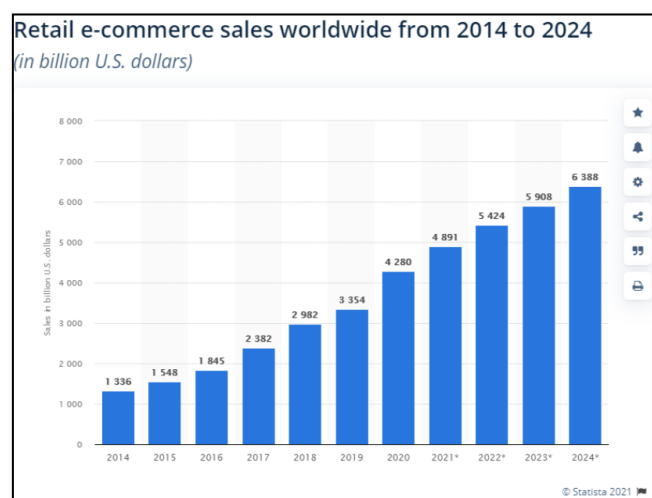

Image source taken from Statista

Impact of AI and ML

AI and ML have transformed the e-commerce sector by making customer experience easier, convenient, more personalized, and providing faster shopping experience. AI and ML can be made to truly understand the challenges of their potential customers by adding value in terms of efficiency and effectiveness to the customers and retail business owners. Let us look at how AI and ML is impacting the future of e-commerce.

1. **Customer Service**
   AI and ML have had positive impacts on the e-commerce sector by responding and providing timely interactions with the customers not only by knowing the customer requirements, but also by providing responses to their queries. Various sites like Amazon, eBay, and other well-known firms have incorporated chatbots in their systems to interact with customers and resolve their queries.

2. **Smart Search**
   AI and ML has transitioned and improved the user shopping experience. One can speak out their wishlist on mobile by using virtual assistant applications like Alexa, Google Assistant, Cortona, or Siri which displays several results related to the search. AI and ML can be used to accurately predict what the customer wants and filter the suggestions as per their needs, and this data can also be utilized to personalize and improve the shopping experience the next time one shops on the same site.

3. **Optimized Pricing**
   It is more common for customers to compare prices of the products on different platforms to find the best deal. Due to dynamic pricing e-commerce business can now change and readjust the prices by considering various factors like demand, day of the week, time of the day, customer type, etc.

4. **Inventory Management**
   AI and ML helps in better forecasting to match the demand needs based on the data availability of the products. Using AI whether you've got an overstock or an understock, forecasting on future demands becomes a lot more precise. This allows to control the supply chain by knowing the demands of the customers and their behavior in different climatic and geographical conditions. This helps in saving time, space, and cost incurred to store the materials.

5. **Security**
   AI can be useful for preventing frauds to customer. Most of the users think that shopping through e-commerce is not secure, and companies are liable to fraudulent activities. AI and ML can help to eliminate such activities by detecting repetitive logins for getting promo codes, fraudulent transactions, or by asking the products to deliver new item in replacement of damage items.

Even though there are lot of advantages in using AI and ML, these technologies involve a high amount of cost for reaping the enormous benefits that they provide. Besides this lack of skilled labors and quality of data that needs to be feed into the system as inputs for ML and tools is another major area of concern while using these technologies.

Considering all these factors, we can say that AI and ML are here to stay. These technologies are going to change the future of e-commerce. It is important for one to understand the value that AI and ML can bring to the e-commerce businesses. The technologies might sound complex at first, but we are bound to see the great rise in these technologies which will be powered by cloud and automation. It will surely impact the business operations and in turn increase the productivity by taking the customer experience to a whole new level.