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2021105302
CEG(ECE)
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Aim:

Our objective is to enhance and refine the original design by harnessing the capabilities of machine learning, resulting in a more advanced and precise analytical framework. This innovation will empower us to uncover more profound insights and deliver highly accurate recommendations to support data-driven decision-making.

Innovations:

Machine Learning Model Selection:

- Research and Selection: Conduct in-depth research to identify the most suitable machine learning algorithms for predictive analysis and anomaly detection. Consider algorithms like Random Forest, Gradient Boosting, LSTM for time-series data, and Isolation Forest for anomaly detection.
- Hybrid Models: Explore the possibility of creating hybrid models that combine the strengths of different algorithms, enhancing prediction accuracy.

Shopping using AR Technology:

- Recent estimates from industry experts like Global Newswire indicate that the augmented reality business is booming and expanding faster than nearly any other technology. Here's how shopping using AR technology is beneficial – Enables customers to visualize products using their smartphones or tablets in a real-world environment.
- Retailers can use AR technology to showcase their products more engagingly and interactively and differentiate themselves from competitors.AR technology can also help reduce return rates, as customers can see how products look and fit before purchasing.
- Shopping using AR technology is an emerging trend in e-commerce that has the potential to revolutionize the way customers shop and interact with retailers.

Predictive Analysis and Anomaly Detection:

- Prediction: Utilize the trained models for predictive analysis to forecast climate trends and social patterns. Generate predictions for future time points based on historical data.
- Anomaly Detection: Implement anomaly detection algorithms to identify unusual patterns or outliers within the data. This is crucial for understanding unexpected events or deviations from regular patterns.

Single-click Checkout:

- Due to the laborious and drawn-out checkout process, transactions usually get lost. About 17% of customers are said to abandon their carts due to a lengthy or difficult checkout procedure. The best way to get over that is to apply single-click checkout. It is a single-page

payment process that is used to process orders. Consumers enter the necessary data, and the payment processor saves their information for future purchases.

Live Shopping Software:

- Since social media has become such an essential part of people's shopping behavior, these tools make it super easy for vendors to sell while they are live on multiple platforms and for customers to purchase during the presentation. The software has great potential and encourages engagement between the two parties.

Buy Now Pay Later (BNPL):

- Buy Now Pay Later (BNPL) is a convenient payment option that enables customers to make online and in-store purchases without paying the full amount upfront. The market's expansion is driven by factors like digitalization, increased merchant adoption, the growing popularity among younger consumers, and the emergence of new lending players offering BNPL services. Younger consumers particularly favour BNPL services due to the advantages it offers.

Click and Collect or BOPIS:

- Buy online, pick up in-store (BOPIS), or click-and-collect is another one of the current trends in e-commerce technology. This commerce involves buying or reserving a product online and picking it up at a shop or pickup location. For company owners, click-and-collect means less money spent on delivery and more people visiting physical stores.

Chatbots:

- A chatbot (known as a conversational agent), is software technology that imitates real human interaction in a written or spoken way. It can be represented as a website bot, chatbot app, social media chatbot, as well as a voice assistant.