



Xen.AI Ecommerce is an Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning based solution for Ecommerce business operations.

Overview

Amount of data is increasing with every single user clicking on the internet. In order to make sense of the vast amount of available data and use it for competitive advantage, one should make use of the latest Data Science, Machine Learning and Deep Learning technologies. For example, to keep customers engaged with the website or to improve the customer's experience, one needs to recommend the customer only the goods and services that he or she would potentially be interested in, i.e. we should develop a recommendation system to offer such personalised services.

It is also important to know what customers are most valuable. We have to know a customer lifetime value (CLV), i.e. predicted net profit, amount which customer will bring into the company during the entire future relationship with a customer. It is needed to optimize a company's growth and business marketing strategies, and adjust advertising campaigns.

Companies should focus on improving customer retention. Having a solid knowledge and confidence in existing customers, it helps businesses to expand their market. Existing customers bring more new customers, so they are the best source of marketing. There are many ways to achieve customer retention but the most commonly used model is a churn model, which should help identify main factors causing customer churn and then take actions in order to keep existing customers.

Living in a digital world where millions of transactions happen with every single click, it is easy to get some fraudulent activity online. So, in order to have a successful eCommerce business, the companies will need to consider implementing some security related



measurements, and accurately predict a fraud probability based on a given type of customer and action.

To retain loyal customers and to attract new customers, one needs to know what customers say about the company. It helps to identify the weak and strong sides of the business and products, and timely take necessary actions.

Goals of Xen.AI Ecommerce Solution

1. Online monitoring of customer activities
 2. Recommendation of goods and services that best match to a given customer
 3. Customer analytics, CLV modeling and churn prediction
 4. Fraud detection
 5. Analysis of customer reviews and their classification
 6. Running chatbots for a customer support
-

Xen.AI Ecommerce Solution Overview

1. Online monitoring of customer activities

It is important to know what kind of customer categories are related with different actions on your website. Free online tools like Google Analytics, Yandex Metrika would help collecting customer data which can be segmented, for example, by geographic location, demographics, device, browser and type of user action. It may also help reveal most visiting web pages and even particular places on those web pages. This information can be used to make predictive models for future user actions and also optimize web page content.

2. Recommendation engine

On the basis of collected data about user activities on the website and by finding similarity between their activities with other users we can create a recommender system through dedicated Machine Learning algorithms (like Collaborative Filtering). It learns from the user's past activities and purchases. These recommendations can be more complete and precise if we use information from the user's profile and items description by applying a content based filtering. The user's profile can be formed from his data during registration, behavior on site, reviews customer read, every story customer share on social media etc.

3. Customer analytics, customer lifetime value (CLV) modeling and churn prediction

Having collected customer data, we can create predictive models that help answering some important business questions like (a) how much a customer can bring to the revenue of a company during his/her lifetime, (b) what most important factors affecting customer retention and churn, (c) how much revenue should be expected for next month/quarter, etc. It is a big data problem which would be solved using modern data processing and Machine Learning techniques. The more such data we have for a longer time period, the more accurate will be predictions.

4. Fraud detection

eCommerce businesses can suffer from a number of fraudulent activities that lead to a profit loss. With the help of Data Science and Machine Learning Techniques, these fraudsters can be found. In order to use Data Science techniques, one needs to detect a list of fraud actions (shipping address differs from the billing address, multiple orders of the same item, etc.). In most cases, using data mining,

time series analysis, clustering and classification to find associated groups in the data help detect anomalies, and predict them online.

5. Analysis of customer reviews

Customers may provide review on the company website or other online services (Yelp, Google, or social media like Twitter, Facebook). While these reviews are quite valuable, their timely extraction, processing and classification is not that easy task.

That is where Data Science techniques such as Natural Language Processing (NLP) may significantly help. One can group and classify reviews, run sentiment analysis, and try to find correlations between positive, negative responses and particular goods/services and/or business strategies.

6. Chatbots

Use of virtual conversational AI agents, chatbots, can facilitate communication with customers and help to effectively resolve many of their needs online. One of the most intensive applications of AI bots is as a personal assistant. It is capable of comprehending open conversations while contextualizing them to a particular case or scenario. The crux of conversational AI bots is to solve customer issues by conversing with them in as few interactions as possible, avoid asking for unnecessary information, and try and leverage the existing content.

7. Usage of Open Source tools

To minimize dependence on vendors, we prefer to use open source tools (like Python and machine learning libraries) as much as possible.



Xen.AI Ecommerce Solution Features

Automated insight generation

Using ongoing and historical data, one can perform factor analysis, and find out driving factors and trends to improve performance of eCommerce business. Results can be presented in clear graphical and tabular formats to be used to better plan business strategy towards different customer groups.

Data storage

Customer data would be needed to run online and offline analytics. We can take care of secure data storage in a cloud-based database.

Real-time recommendation system

The more engaging a website is, the more people will shop there. This will eventually increase the revenue of the eCommerce company. We can train and set up a recommender system that would recommend proper goods for each customer in real time.

Automated training of predictive models

All models should be trained autonomously on a regular basis. It helps provide accurate recommendations, churn analysis, CLV predictions with minimal human involvement, and be constantly available for business needs.

A/B testing.

Often it is hard to say a-priori which version of a website or machine learning model is best. Sometimes it is necessary to experiment with different views of websites for different



customer groups. Similarly, we can train a few machine learning models and choose the best ones using ongoing data.

Key Benefits of Xen.AI Ecommerce Solution

Xen.AI Ecommerce solution can be helpful for most eCommerce businesses who are struggling with a large amount of diverse data, and trying to reach their target audiences to increase their sales. We suggest the following:

- Automated reports showing key metrics and their relationship with customer data in an online regime. Online monitoring of current and expected metrics would reveal main trends, and help define business strategy.
- In-built recommendation system, which allows recommending specific goods and services to different customers individually based on historical data.
- Customer analytics, prediction of customer lifetime value, cost of attracting customers, churn analysis. It helps businesses in deciding their spends, know about their customers and effectively plan their future.
- Run fraud detection models to predict main factors causing the fraud and timely take actions to prevent them.
- Periodical analysis of customer reviews to determine positive and negative sides and business to quickly tune business tactics and increase the number of loyal customers.
- Run AI chatbots that can facilitate communication to customers and help resolve many of their needs online.

Contact Us

Web: www.Xen.ai

Email: support@xen.ai



Innovative Artificial Intelligence Solutions

Web: www.xen.ai Email: support@xen.ai

USA:

Param Namboodiri

501, Gibson Dr, #2624

Roseville, California - 95678, USA

Phone: +1 408 221 6976

INDIA:

Shanawaz Hakeem

ES 11, Heavenly Plaza, Kakkanad

Kochi – 682021, Kerala, India

Phone: +91 907 488 7447
