

## Design and Implementation of a Software Platform Based on Artificial Intelligence for Product Recommendation

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**Abstract :** Nowadays, artificial intelligence is used successfully in academia and industry for its ability to learn from a large amount of data. In particular, in recent years the use of machine learning algorithms in the field of e-commerce has spread worldwide. In this research study, a prototype software platform was designed and implemented in order to suggest to users the most suitable products for their needs. The platform includes a chatbot and a recommender system based on artificial intelligence algorithms that provide suggestions and decision support to the customer. The recommendation systems perform the important function of automatically filtering and personalizing information, thus allowing to manage with the IT overload to which the user is exposed on a daily basis. Recently, international research has experimented with the use of machine learning technologies with the aim to increase the potential of traditional recommendation systems. Specifically, support vector machine algorithms have been implemented combined with natural language processing techniques that allow the user to interact with the system, express their requests and receive suggestions. The interested user can access the web platform on the internet using a computer, tablet or mobile phone, register, provide the necessary information and view the products that the system deems them most appropriate. The platform also integrates a dashboard that allows the use of the various functions, which the platform is equipped with, in an intuitive and simple way. Artificial intelligence algorithms have been implemented and trained on historical data collected from user browsing. Finally, the testing phase allowed to validate the implemented model, which will be further tested by letting customers use it.

**Keywords :** machine learning, recommender system, software platform, support vector machine

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