MEMOIRE

En vue de l'obtention du diplôme de **Master**

Filière : **Informatique**

Spécialité : **Systèmes d'Information et Web (SIW)**

Thème

Recommender Systems approaches based on Data Mining techniques:
Study and comparison

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Soutenu le : **27/09/2020**   Devant le jury composé de :

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Année Universitaire : 2019 / 2020

Abstract

The widespread of the internet caused a massive increase in its users, which helped the online services to conquer a larger market share, and as a result, most of our activities depend on those services. But also, it becomes easy to falsify and fake a lot of products, which allow the creation of massive similar information and contents of different types for the user. It results in a variety of challenges, such as the way to choose the correct product or how to find the best possible deal through ever-increasing data. Online services such as Netflix, Spotify, and many other e-commerce companies who deliver on-demand services to users, have introduced help mechanisms and created robust systems to support consumers facing those challenges by providing suggestions based on their preferences. In order to apply these strategies, it is essential to identify the interests and tastes of users to recommend suitable articles. However, due to the changing user habits and evolving trends, making relevant recommendations becomes more complicated and a difficult task to accomplish, which requires tending towards intelligent behavior to

make recommendation engines able to be scalable to billions of users with multiple preferences, to propose adequate elements, and to diversify recommendations. It is thus important to implement data mining methods and machine learning algorithms in recommender systems to identify user's needs and extract as much knowledge as possible from existing information to create models capable of making suitable predictions. In this report, we will present the state of the art of existing research in the field of the usage of data mining techniques in the recommendation systems. Also, we will study different types of recommender systems, data mining techniques, and machine learning algorithms which makes it possible to make a comparison between the works analyzed then synthesis to acquire sufficient knowledge in this field of study.