

# *Personalized Marketing and Recommendation Systems on TikTok*

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**Abstract:** Given the proliferation of data, personalized marketing and recommendation algorithms have become essential components of digital platform marketing. The paper examines the terrain of customized marketing and recommendation systems in the digital age, specifically concentrating on TikTok. The study utilizes a literature review method to clarify the core principles and mechanisms that form the basis of TikTok's recommendation algorithms. The importance of this research is in identifying the effects of tailored marketing methods on user engagement and satisfaction. The study explores how TikTok combines content-based and collaborative filtering methods, shedding light on the issues presented by content similarity and the platform's unique solutions. The methodological framework includes the analysis of data such as user engagement, click-through rates, and feedback channels to assess the efficacy of tailored content. This study offers valuable insights into improving recommendation algorithms, tackling ethical issues, and adjusting to changing user preferences.

**Keywords:** TikTok, Personalized Marketing, Recommendation Systems, TikTok Affiliate

## 1. Introduction

Personalized marketing and recommendation systems play a crucial role in digital platforms within a data-driven environment. They utilize extensive data sets to customize information, products, and services according to individual interests and behaviors, hence enhancing user experience and engagement. As technology progresses, these systems have a significant impact on enhancing user satisfaction and facilitating businesses in establishing deeper relationships with their target audiences. They also contribute to strengthening consumer loyalty and optimizing the overall effectiveness of marketing efforts. The utilization of data-driven insights allows platforms to flexibly adjust to evolving user trends, guaranteeing that the tailored experiences they provide stay pertinent, captivating, and in line with the shifting demands of the digital landscape.

This study examines the recommendation algorithm of TikTok and conducts a literature analysis to acquire a comprehensive understanding of its method. The research progresses by assessing user engagement indicators and feedback systems, so enhancing our comprehension of the influence of targeted marketing. The paper also explores many practical uses of leveraging the TikTok platform for targeted marketing.

The objective of this study is to elucidate TikTok's inventive approach and offer helpful insights to professionals and scholars. The purpose is to demonstrate how TikTok's hybrid recommendation

model effectively tackles obstacles and encourages user engagement. This will be achieved by presenting actual examples of how professionals can utilize TikTok to expand their business reach, thus making a valuable contribution to the ever-changing digital marketing industry.

## **2. Basic Knowledge of Personalized Marketing and Recommendation Systems**

Personalized marketing and recommendation systems have become essential features on various digital platforms in today's data-driven landscape. Personalization in marketing refers to the process of modifying material and ideas to match specific customer preferences. This is done to increase user engagement and create a sense of endorsement [1]. Furthermore, recommender systems are designed to incorporate consumer preferences and produce customized recommendations for items and services. This feature is widely recognized as a great tool for personalized marketing, namely the strategic method of marketing that caters to each customer on an individual level [2].

Taking the TikTok platform as an example, TikTok is a platform that uses algorithms to recommend videos directly to its consumers, focusing on content. Moreover, the effectiveness of recommendation algorithms depends on the availability of a large amount of user behavioral data. TikTok efficiently collects a wide range of user interaction data, including metrics like video views, likes, shares, and comments. TikTok's recommendation algorithms utilize advanced machine learning techniques to accurately analyze users' past reaction patterns. This enables the platform to propose films that fit with users' preferences and also helps users discover new content in different fields [3].

TikTok has a recommendation algorithm that combines machine learning and artificial intelligence technology. TikTok's "For You Feed" feature combines content from influencers and emerging producers, promoting user-generated content of exceptional quality that is determined by viewer engagement. This feature also motivates new content creators to share their videos with the public. The key feature of this technique is that it gives every creator the chance for their videos to become viral in the feed. Moreover, TikTok's recommendation algorithm consistently offers video suggestions to users who possess comparable interests or characteristics to the authors of the videos. This approach functions to amplify the visibility of videos and streamline the swift distribution of top-notch content. Significantly, the algorithm considers not only the creator's number of followers and reputation on the network, but also takes into account elements such as video titles, music, content tags, and other relevant aspects. These features are combined with user activities, including videos that the user has liked and viewed, the user's own content, and specific areas of user interest [4].

When evaluating the effectiveness of personalized marketing and recommendation systems, many measures are used, such as user engagement, click-through rates, and the duration of user activity on the platform. Moreover, user feedback mechanisms and satisfaction surveys can provide significant information into the perceived quality of tailored content. The evaluative metrics provide a thorough picture of the impact and efficiency of tailored marketing campaigns. They reveal both quantitative and qualitative aspects of user interaction with the platform [5]. Therefore, it is crucial to continuously improve recommendation algorithms in order to increase accuracy, address ethical issues such as prejudice resulting from large amounts of data, and adapt to ever-changing user preferences. Ensuring the security and privacy of users' personal data is crucial for building trust between the platform and its users, and for providing a secure and satisfactory user experience [6].

## **3. Personalized Recommendation Algorithms and Models on TikTok**

The previous discussion has clarified the underlying principles of TikTok's content-based recommendation algorithm. Moreover, this part thoroughly explores several aspects of TikTok's personalized recommendation algorithm, including the integration of the collaborative filtering recommendation system with content-based recommendation systems.

TikTok utilizes a filtering method that is not exclusively based on content, as it acknowledges the limitations of this approach [7]. Exclusive dependence on content-based recommendation systems might lead to a similar pattern in online consumption of different media, such as music, products, and movies. Although content-based recommendation systems are excellent in providing individualized suggestions based on users' historical preferences and explicit features, they are prone to creating the problem of an overly homogeneous information cocoon. This situation emerges due to the dependence on users' past behavior, which unintentionally strengthens existing preferences and limits exposure to varied content. The concept of an over-homogeneous information cocoon occurs when consumers are regularly provided with recommendations that closely match their previously expressed preferences. While the primary goal of this practice is to increase user pleasure, it inadvertently limits the range of information and material available to consumers. Over time, individuals may become trapped in a limited content bubble that is closely connected to their previous selections, preventing them from exploring new and diverse interests [8]. Therefore, TikTok utilizes a collaborative filtering process as a means to counteract this constraint. The collaborative filtering mechanism used by TikTok has the ability to unintentionally expose users to new hobbies, which in turn can encourage them to spend more time on the platform. Collaborative filtering methods, such as item-based filtering and user-based filtering, are based on data mining concepts. They find similarities between items or users and use these similarities to broaden the range of options. Item-based filtering recommends material that is similar to what users are already interested in, with a focus on relevancy. Conversely, user-based collaborative filtering functions on a comparable premise by suggesting content according to the preferences of other users. For example, people with comparable features may have similar preferences, which allows the algorithm to find users with similar characteristics and offer areas of interest that might help expand their respective interests [9-10]. Therefore, the recommendation algorithm not only suggests content that matches users' current interests but also introduces new and surprising themes, thereby enhancing the user experience with greater diversity and enrichment.

TikTok has improved its recommendation engine by combining a content-based method with a collaborative filtering approach. This hybrid model takes advantage of the capabilities of both technologies. Over time, as more user data is collected, the algorithm will continuously enhance recommendations by adapting to changing user preferences, resulting in more accurate recommendations. The hybrid architecture allows TikTok to overcome the limitations of using a single recommendation strategy and also promotes the growth of a stronger and more flexible system.

#### **4. Practical Application of Personalized Marketing on TikTok**

Personalized marketing has become a prominent feature in the digital realm, with TikTok being a prime example of how personalization methods can enhance user experience and engagement on a dynamic content-focused platform. This section explores the practical implementation of personalized marketing on TikTok, specifically focusing on important elements such as personalized advertising and targeting methods, as well as techniques related to personalized promotion and coupons.

TikTok, a social media network focused on short-form videos, has experienced a surge in popularity among both users and marketers. The statistical data indicates a significant number of users, with 800 million users who are active on a monthly basis and an impressive 1 billion video views every day on the site. Based on these data points, the way customers engage with user-generated material, such as liking, sharing, commenting, and updating their status, is seen as a substitute for traditional offline shopping behaviors and trips to physical stores. Furthermore, it is customary for users of social media to exchange product and brand recommendations, highlighting the importance of shared material among peers. Significantly, this shared material has shown a greater influence on

factors such as ad recall, brand recognition, and purchase intent when compared to traditional forms of paid advertising [11]. Hence, the effective utilization of targeted advertising and positioning strategy becomes crucial in maximizing the conversion rate among TikTok's vast user base of 800 million monthly active users.

For example, Gymshark, a company in the fitness industry, made a deliberate decision to focus on attracting a younger audience on TikTok starting in early 2019. This choice resulted in the launch of the "66 Days: Change Your Life" competition on the platform. Participants were urged to express a personal objective with a projected accomplishment date of March 8, which is approximately two months after the start of the campaign. An enticing reward was provided, guaranteeing the victor of the competition a full year's worth of Gymshark stuff. To expand the campaign's reach, Gymshark established partnerships with six influencers who had a greater number of followers on TikTok compared to Instagram. The campaign's chosen hashtag, #gymshark66, received a substantial viewership of 45.5 million impressions. As a result, TikTok viewers were familiar with Gymshark mostly because of the informative information showcased in numerous advertising videos. The company's strategic connection with influencers facilitated a direct communication channel with its target demographic, specifically fitness fanatics [12].

The example of Gymshark's deliberate entry into TikTok highlights the significant benefits linked to customized advertising on this platform. The customized aspect of the challenges, where users define their own goals and timetables, not only resonated with the target population but also fostered increased levels of user involvement. The decision to provide participants a year's worth of Gymshark clothing as a reward adds a personalized element, giving them a concrete incentive that precisely matches their fitness goals. In addition, Gymshark effectively utilizes TikTok influencers who are specifically tailored to deliver Gymshark's messages to an audience that is responsive to the unique dynamics of the platform. The utilization of the campaign hashtag, #gymshark66, resulted in a substantial viewership of 45.5 million, highlighting the platform's ability to enhance the visibility of personalized content. The effectiveness of tailored marketing on TikTok is evident in the tangible advantages gained by Gymshark, allowing them to implement campaigns that are not just focused but also captivating and community-oriented. The unique features of TikTok, along with Gymshark's clever use of tailored marketing tactics, highlight the platform's effectiveness as a dynamic space for building brand recognition, encouraging interaction, and effectively connecting with certain audience groups.

Additionally, the utilization of customized promos and discount methods is crucial in enhancing user engagement and conversions on TikTok. Brands carefully utilize personalized promos tailored to specific consumers, offering incentives that closely match their tastes. An example of this can be seen in the field of affiliate marketing, a well-established business technique supported by TikTok. In the context of affiliate marketing, marketers form partnerships with influencers to promote items through their original content, with influencers receiving commissions from the sales that arise from their endorsements [13].

TikTok has a focused strategy to push content that matches users' interests, including the areas related to the online celebrities they follow or prefer. Within this dynamic, influencers provide their followers with coupons, enabling them to obtain savings. Brands can assess the efficacy of influencer-driven sales by analyzing the frequency at which a promo code is used [14]. Studies indicate that affiliate marketing on the TikTok platform can effectively influence the purchasing inclinations of certain demographic groups [15]. These customized incentives not only encourage users to investigate and make purchases but also cultivate brand loyalty among consumers. Simultaneously, they contribute to enhancing the popularity and awareness of internet celebrities to a certain extent. TikTok's algorithmic approach effectively utilizes personalized incentives to ensure that customers receive advertising specifically tuned to their interests. Hence, the implementation of affiliate

marketing on TikTok presents itself as a mutually beneficial agreement, benefiting both businesses, influencers, and consumers.

## 5. Conclusion

The paper asserts that TikTok strategically incorporates content-based and collaborative filtering recommendation methods to address concerns over content homogeneity. It highlights the platform's commitment to improving customer satisfaction by delivering personalized content.

However, the paper acknowledges particular limitations. The statistics and cases discussed in the article are obtained from secondary sources, which may restrict their applicability to all situations. Nevertheless, the paper recognizes the necessity for additional exploration in this domain in future research endeavors.

The paper predicts continuous progress in improving recommender systems, with a focus on ethical considerations and the ability to react to changing user behaviors. This viewpoint highlights the ongoing development of customized marketing in the digital domain, with TikTok being a dynamic example of this always shifting environment.

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