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# Artificial Intelligence Reshaping the Business Model of the Streaming Media Industry: A Case Study Based on Netflix

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**Abstract:**

Against the backdrop of the vigorous development of the digital economy and the rise of the Artificial Intelligence (AI) industry, streaming media platforms have developed rapidly. The text aims to analyze how the recommendation algorithms of AI contribute to reducing transaction costs with users, alleviating information asymmetry, achieving long-tail effects, and the future development direction of enterprises. This paper is based on the Netflix streaming media platform, which generates personalized homepage recommendations with the help of AI by analyzing users' viewing time, rating, pause, fast forward and other data. This not only reduces the decision-making cost of users in massive content, but also improves the retention rate and subscription tendency of platform users, and also provides big data reference for the subsequent film and television production of enterprises-the client realizes the transformation from traditional on-demand to customized recommendation, and the enterprise integrates the user behavior information of the whole platform with AI to clarify the production direction. This paper adopts case study method, takes Netflix as the core analysis object, and combines its financial performance report, industry journals and literature to explore the fundamental reshaping of the business model of streaming media industry by AI from the aspects of production, distribution and profit model under the digital economy.

**Keywords:** Streaming media; AI; personalized recommendation.

## 1. Introduction

The digital economy has the characteristics of strong penetration and wide coverage. At the same time, information as a production factor breaks the limitations of traditional time concepts, and AI is the production machine of the new era. After integrating information, it can enhance the work efficiency of

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employees internally, alleviate the information asymmetry of customers externally, and at the same time achieve contributions such as the long-tail effect. As a leading global streaming media company, Netflix is the main subject of analysis in this article. Netflix, which was once a company that emphasized "unlimited rental and no penalty for overdue", has firmly established itself by relying on the DVD rental business, revolutionizing the era of traditional DVD rental services. With the development of the Internet, the copyright fees of streaming media platforms have increased. To avoid copyright disputes, Netflix began to use AI to analyze big data and created the hit TV series "House of Cards". On this basis, it also created hit TV series such as "Black Mirror" and "The Crown". The integration of AI has "tailor-made" customized series for Netflix subscribers, thereby enhancing users' loyalty to the platform and their enthusiasm for continuing to subscribe. At the same time, the company's streaming media service has expanded internationally, and the target audience for customized services has expanded to foreign users. During the COVID-19 pandemic in 2020, when Netflix's online streaming platform was booming, it launched the global hit series "Squid Game", once again revealing that AI plays a positive role in reshaping the business model of the streaming industry.

This article will explore how an AI recommendation algorithm based on Netflix's collection of users' viewing behaviors on streaming platforms can reshape the business model of the streaming industry.

## 2. Literature Review

Research focuses of this article lies in the reshaping of the business model of streaming media platforms due to the integration of AI.

Against the backdrop of an unsaturated streaming media market with considerable room for growth, the common "winner-takes-all" model in digital businesses does not apply here. The key points and form of the content play a decisive role [1].

The vast amount of behavioral data generated by users on Netflix poses challenges to the efficiency and accuracy of analysis for Netflix. However, if AI technology is incorporated, all these issues can be fully addressed. AI technologies such as machine learning and evolutionary algorithms can significantly enhance efficiency and accuracy [2]. AI has a promoting effect on Netflix's design innovation. The company has deepened the core principle of design thinking - people-oriented - by collaborating with AI technologies. This personalized recommendation mechanism that can be tailored to each individual is reflected on Netflix as providing customized recommendation services for every user [3]. By using this personalized recommendation service, Netflix not only increases the probability of users discovering content of interest and enhances their experience but also can find long-tail content with a certain degree of matching in its vast content library for recommendation, fully leveraging the long-tail effect [4]. Netflix's streaming platform has enhanced customer retention and engagement by applying personalized AI algorithms. This recommendation algorithm can precisely recommend content to customers, and the continuous experience of users browsing the content they are interested in can improve user satisfaction, thus making users more willing to pay for the next subscription [5]. A survey targeting millennials found that two out of four groups felt good about the brand experience of Netflix, and three out of four groups would choose to continue paying for subscriptions on Netflix [6].

At present, AI is not independent of the SVOD business model but is deeply integrated into the core of the entire process of "user demand - content creation - recommendation - ecological extension" [7]. Netflix's overseas expansion strategy is also closely related to AI. In South Korea, Netflix freely shares the PVR algorithm that relies on AI to analyze user data. Combined with local preferences in South Korea, it helps Netflix recommend popular shows such as "The King" and "Squid Game" to target users [8].

During the earnings call for the second quarter of 2025, Netflix stated that the TV series "EI Eternaut", which became a hit in Argentina in 2025, had a scene where the creators wanted to show the collapse of buildings in Buenos Aires. The team achieved an outstanding effect at an astonishing speed through AI-driven tools. It is 10 times faster than the traditional method. At the same time, people are currently piloting the use of the dialogue experience function, which recommends content that users might like by chatting with AI [9].

However, the development of The Times often has limitations. The analysis of AI needs to be based on users' big data. Only after the information processing of big data can the content that users need be output, which is one of the "personalized recommendations" discussed in this article. This kind of "recommendation list" derived from the analysis of users' personal information will lead to the full exposure of personal information. The main challenge faced by intelligent information systems lies in how to ensure the protection of personal identity information and privacy while using personal data [10,11].

## 3. Discussion on Netflix and AI

### 3.1 The Rise of Netflix

Netflix was founded in 1997 by Reed Hastings and Mark Randolph. It is a company mainly engaged in a monthly online subscription model, providing users with unlimited film rental services. In 1999, the company launched a

rental service of "online reservation + offline mail delivery", transforming the profit model of this industry from a per-use charge to a membership system. At the same time, it proposed an innovative proposition of "unlimited rental period and no penalty for overdue" in response to the issue of penalty fees within the industry, thus revolutionizing the business model of the traditional DVD rental industry.

With the development of the Internet and technology, the Internet has entered thousands of households. The immediate satisfaction provided by streaming media to users has dealt a heavy blow to the DVD rental business, and the market share of DVD rentals has gradually declined. Subsequently, Netflix quickly adjusted its direction and entered the streaming media market.

In 2007, Watch Now was officially launched, providing users with online playback services. Surprisingly, however, Watch Now chose not to include advertisements, which was completely different from the behavior of Disney's broadcast media that inserted advertisements during the same period. This strategy has provided a stable channel for Netflix's user growth and has gradually established its user base on the streaming platform.

But then, in the face of the dual pressure of copyright recycling and the increase in copyright prices, Netflix's subscriber base and stock price suffered a heavy blow, forcing it to choose to transform again. In early 2011, in order not to be affected by copyright, Netflix began to try creating its own TV series. In 2012, the launch of "LILYHAMMER" marked Netflix's official entry into the upstream of the film and television industry - content production. This TV drama set in Norway set the highest broadcast record in Norway at that time after being aired on Norwegian television. The first step taken is often difficult. Although it has been defined as a "niche American TV series", it cannot deny the success of " LILYHAMMER" as a pioneer of original TV series. The drama "House of Cards", which was launched on the platform in 2013, became a phenomenon-level hit of the year. The self-produced drama based on big data not only gained recognition from the audience but also received awards such as the "Emmy Awards" in the industry. Subsequently, the company will focus on mining and analyzing users' preferences for investment, production and distribution. In recent years, through innovation and optimization, many popular and hit TV series have been produced, such as "Black Mirror", "The Crown", "Rome", "Love Death & Robots", etc. Squid Game, which was launched in 2021, became a global hit and swept the world.

### 3.2 The Key Factors for Netflix's Successful Transformation

One of the reasons why Netflix has been able to successfully transform is the "Netflix prize" competition that began in 2006. This competition offers a reward of one million US dollars for an algorithm that can predict TV ratings. Finally, in 2009, this huge award went to the "BellKor Pragmatic Chaos" team, which successfully increased the predicted success rate of Cinematch by 10%. After reaping the benefits, Netflix attracts participants from all walks of life with high bonuses every year and continuously iterates the algorithm of its recommendation system.

Netflix's 2020 annual report mentioned that it will continue to invest technical resources to optimize the content recommendation function. Netflix collects users' behavioral actions on the platform (such as searching, playing, replaying, fast-forwarding, clicking, etc.) and uses AI analysis to create directions for the company's subsequent investment and main promoted series. At the same time, after its launch and release, AI technology will be used to recommend a "customized" viewing list for potentially interested users. A two-pronged approach ensures the possibility of the series going viral.

From a downstream enterprise in the film and television industry to becoming an upstream film and television production company capable of releasing self-produced series, from the initial Cinematch algorithm to the subsequent recommendation system, Netflix's success is attributed to the empowerment of the recommendation system by AI.

It is worth mentioning that Netflix has been constantly optimizing and modifying the personalized homepage to present all the content that users are more interested into them. The addition of AI has not only optimized the user experience on the Netflix platform in terms of viewing content but also in recommending content. The most successful evidence is that the revenue in the financial reports has been steadily increasing over the past five years.

Netflix invites a large number of viewers to watch its films and record their content at the same time, adding tags to each film, such as romantic scenes, comedy, sadness, horror, suspense, etc. By integrating AI algorithm recommendations, through users' preferences and video tags, the content that users truly like is mined and matched, and then presented on the user's homepage. Through push notifications and users' continuous clicks, these "non-popular" contents may also be transformed into popular ones.

In addition, the content library on the Netflix platform is constantly expanding over time. While users are searching for or selecting other films, their various operations will also be recorded by the system, serving as a channel for collecting users' preferences.

For instance, User A doesn't care about the era in which the TV series was filmed; he only desires good shows. If all the content searched on the platform is classic TV series, then as the number of searches increases, the AI will

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recommend more classic TV series to its recommended content page. Although the copyright cost of this series remains unchanged, it has led more members to choose to pay to join Netflix to watch this film, and at the same time, it can also cause the company's profits to continue to grow.

## 4. The Risks and Hidden Dangers Brought by the Development of AI Streaming Media Platforms

While AI is reshaping the business model of the Netflix platform, it also brings some hidden dangers. The recommendation algorithms of AI will to some extent leak users' personal information. The recommendation algorithm of AI is derived from the behavioral data generated by users on the platform. The "recommendation list" calculated by AI will reveal users' personal preferences. Secondly, after AI analyzes the behavioral information generated by users on the platform, where this behavioral information will be stored and whether it will be reused is a question worth discussing.

The recommendation algorithm of AI will create a personal information cocoon for users. AI collects and analyzes the behaviors generated by users on streaming media platforms to recommend "customized" viewing recommendations for individual users. When users have strong "short-term desires" and need immediate satisfaction of their viewing needs, AI will recommend corresponding content, but it will ignore the users' personal "long-term shaping" of themselves, such as the viewing needs for elegant film and television content like documentaries. After obtaining timely satisfaction for a long time, users will inevitably be trapped in an "information cocoon", that is, all the recommended lists are based on "short-term desires". Conversely, the recommendation lists of users are all "long-term shaped" recommendations. This approach will cause users to be dissatisfied with the platform.

The recommendation algorithms of AI may lead to companies having a monopolistic effect on the market. The algorithms of different companies are all different, and they all require a large amount of user behavior data for iteration and innovation. The shortcut to achieving a hit drama is to infer user behavior preferences through big data. Both of these points are very difficult for some small and medium-sized companies to achieve. Netflix is a leading enterprise in the streaming media platform industry, with a vast amount of user behavior information and the company's financial support. It has a relatively complete user preference recommendation mechanism, which ensures that users always have something they want to watch on the platform. At the same time, by leveraging big data information on user behavior, the company can have a certain guiding role when investing in TV series content in the future, making it easier to generate regional or global hit TV series. This also gradually increases the success rate of the company's investment in hit content and reduces the cost of trial and error. However, small and medium-sized companies do not have the same user base as Netflix and the relatively complete big data and AI algorithms, which has led to Netflix having a certain monopolistic ability in the current streaming media platforms.

Although the TV series invested in by the Netflix platform through user big data have the potential to become blockbusters, they cannot escape the problem of homogenization of big data-based works. Moreover, there are also potential copyright risks for generative AI in TV series production. In its 2024 financial report, Netflix also mentioned the use of AI in the production of film and television content. However, current laws do not clearly stipulate the copyright of content claimed to be generated by AI, whether it belongs to the company that generated the content at present or to the individual or company that referred to the content by AI. This will have certain legal risks in the future.

## 5. Conclusion

This article adopts the case analysis method to examine the application of AI in Netflix, which is specifically reflected in the consideration of big data in the production of TV series and personalized intelligent recommendations in user usage. This article further points out that AI has reshaped the business model of the streaming media industry. The main business has evolved from merely covering the downstream of the industry to now encompassing the entire industrial chain, including content production, targeted promotion and distribution, and platform provision.

The AI algorithms of Netflix, supported by a large amount of user data, draw more accurate conclusions, optimize the user experience and enhance users' loyalty to the Netflix platform, thereby achieving a virtuous cycle of producing high-quality content, having a good user experience and high loyalty, and generating profits from user subscriptions. AI can better select the development direction with advantages for the company.

However, at present, the application of AI in streaming media platforms still poses certain risks and hidden dangers. For instance, the fact that companies can also use AI algorithms to make precise user recommendations, predict the combination factors of hit TV series, the copyright issues of content generated by AI are not clearly defined in current laws, and user privacy is exposed without any omission under AI algorithms still needs to be further addressed.

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