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THE ROLE OF AI-DRIVEN ALGORITHMS ON USER ENGAGEMENT AND MEDIA CONSUMPTION TRENDS IN OTT PLATFORMS

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Abstract

This research explores the effect of AI-driven algorithms on user engagement and media consumption trends within Over-The-Top (OTT) platforms. Online streaming services like Netflix, YouTube, and Amazon Prime are dominating the media landscape where AI personalization influences user behavior and to analyze changes in media consumption trends shaped by recommendation systems. PRISMA framework was adopted to analyze relevant peer-reviewed studies published between 2018 and 2025 and 26 articles were selected for review analysis based on inclusion/exclusion criteria. The literature reviewed reveals that AI algorithms greatly influence user engagement through personalizing content suggestions which increases satisfaction, enhances retention, and shifts users toward binge-watching. Furthermore, AI-driven personalization is found guiding users to content that aligns with their preferences, which raises concerns related to content diversity, filter bubble effects, and user awareness of algorithmic curation. This study contributes to a deeper understanding of how AI is shaping media consumption, offering both opportunities and challenges for users and content providers alike. This comprehensive review also identifies research gaps, such as the need for cross-platform comparisons and long-term behavioral studies which will provide valuable insights for future research.

INTRODUCTION

In recent years, Over-The-Top (OTT) platforms have significantly made a difference in the way media is consumed by leading the audience to choose the flexible, streaming services which are on-demand in comparison to the traditional linear television. Services like Netflix, Amazon Prime Video, and Hulu have accumulated immense following due the ability to offer the audience personalized media experiences. (Gomez-Uribe & Hunt, 2015).

The level of personalized experience is mainly enabled by the use of algorithms powered by Artificial Intelligence (AI) which examine the user data- which includes the viewing history, search process, and engagement patterns to better anticipate the preferences of the viewers and for better customized experience. These systems not only help enable a better user experience but it also enhances the viewer engagement, solidifying consistent engagement by means of constant content curation (Zhang et al., 2021).

The influence of AI on digital media cannot be challenged; however, most academic work found on

the concerned research addresses the technical aspects, such as the designing of the recommendation systems and the efficacy of the designed algorithms. What is lacking is the research in the socio-behavioral aspect: in particular, how AI- powered algorithms affect the user choices and the impact on the larger user consumption patterns within these OTT platforms. For instance, Bozdag, (2013) raises concerns that personalization, while convenient, may contribute to selective exposure and reduce the diversity of content consumed by users.

The literature review presented is directed towards addressing the existing gap by critically analyzing the interplay between AI-driven recommendation systems and evolving consumption behaviors on OTT platforms. By synthesizing current interdisciplinary researches, this study examines developing inclinations, user perceptions, and the ethical considerations related to the algorithms which are curating content in the OTT platforms. This study also highlights the dynamics of engagement and content selection shaped by AI and offers insights into the dual role of personalization; as both an enabler of user satisfaction and a potential driver of content homogeneity within the OTT ecosystem.

1.1. Research Objectives

O_1: - To discover the role of AI-driven algorithms in framing user engagement on OTT platforms.

O_2: - To analyze the influence of AI on media consumption patterns, particularly in relation to personalization provided by content recommendation systems.

1.2. Research Questions

RQ_1. How do AI-driven algorithms influence user engagement on OTT platforms?

RQ_2. In what ways have AI algorithms altered media consumption patterns on streaming platforms?

1.3. Significance

This research is significant as unlike previous researches, it provides a comprehensive synthesis of different researches in an overview. There has been limited investigation into how algorithms directly influence user engagement and media consumption habits. This study emphasizes how viewers' interactions with algorithms determine their choice of content, viewing habits, and even their reactions. With emphasis on behavioral aspects, it gives insightful information about how targeted recommendations alter how people consume media on OTT platforms and how it limits variety in content being served.

1.4. Theoretical Framework

AI-driven algorithms have become instrumental in curating content for users among Over-The-Top (OTT) platforms. These algorithms work with large amounts of data including interaction behavior, viewing history and search activity of each user to provide tailored recommendations (Fieiras-Ceide et al., 2023). Even though it increases user satisfaction and ensures loyalty to platform, it also promotes habitual consumption. This pattern is achieved through constant adjustments by AI, based on user responses and enhances discovery through more streamlined and interactive behavior (Singh et al., 2024). There are ethical concerns attached to this AI based personalization regarding transparency, control, and privacy (Milano et al., 2020).

This study employs Filter bubble theory by Eli Parisier in 2011 which enables us to grasp the influence of algorithms on OTT platforms and how it limits users' exposure to the remainder of accessible content. (T. T. Nguyen et al., 2014). Consumers are exposed to homogeneous content based on past choice patterns due to personalization and customization offered by algorithmic filtering (Tan & Yoon, 2024). This theoretical perspective helps us understand how an information tunnel vision is created for the users due to which exposure to various perspectives is neglected hence building up existing biases (Dubovi & Tabak, 2021). These theoretical understanding assist us to articulate complicated socio-behavioral consequences of AI on media consumption within changing OTT context, which affect not just on an individual level but also on a broad societal level.

Most millennials unaware of the concept of filter bubbles despite being subject to its consequences. Through being made aware, consumers broaden their consumption of media (Kumari et al., 2024). Though algorithms increase experience and engagement among the user, they mostly narrow down the nature of media being consumed by user on OTT platforms. Socially, these algorithms tend to influence by shaping

consumers' experiences that increase engagement by consumers and extend exposure (Schaap et al., 2024)

3. Methodology

This research employs systematic review methodology to study the impact of the AI powered algorithms on media consumption and the user preferences within Over-The-Top platforms. Systematic reviews are appropriate for synthesizing empirical discoveries and theoretical perceptions across numerous studies, providing with a rigorous and inclusive overview of the current research landscape (Bozdag, 2013). The reviewing process for this study follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, to ensure transparency. This helps in being able to replicate and achieve methodological accuracy for the procedures opted for identifying, selecting and screening relevant literature (Page et al., 2021). The literature is selected by predefining exclusion and inclusion criteria for selection of peer-reviewed journal articles published between year 2018-2025.

3.1. Search Strategy

Prominent databases such as Google Scholar, Scopus, ScienceDirect, and IEEE Xplore were methodically searched by using the key terms including "OTT platforms", User engagement", AI algorithms", "media consumption trends", and "content recommendations". These databases help to identify studies of diverse nature, encompassing both empirical studies and theoretical perspective that explore AI's role in shaping using behavior and media consumption on OTT platforms (Gomez-Uribe & Hunt, 2015). Search filters like publication year (2018-2025) and peer-reviewed journal articles were applied along with keywords to get focused results.

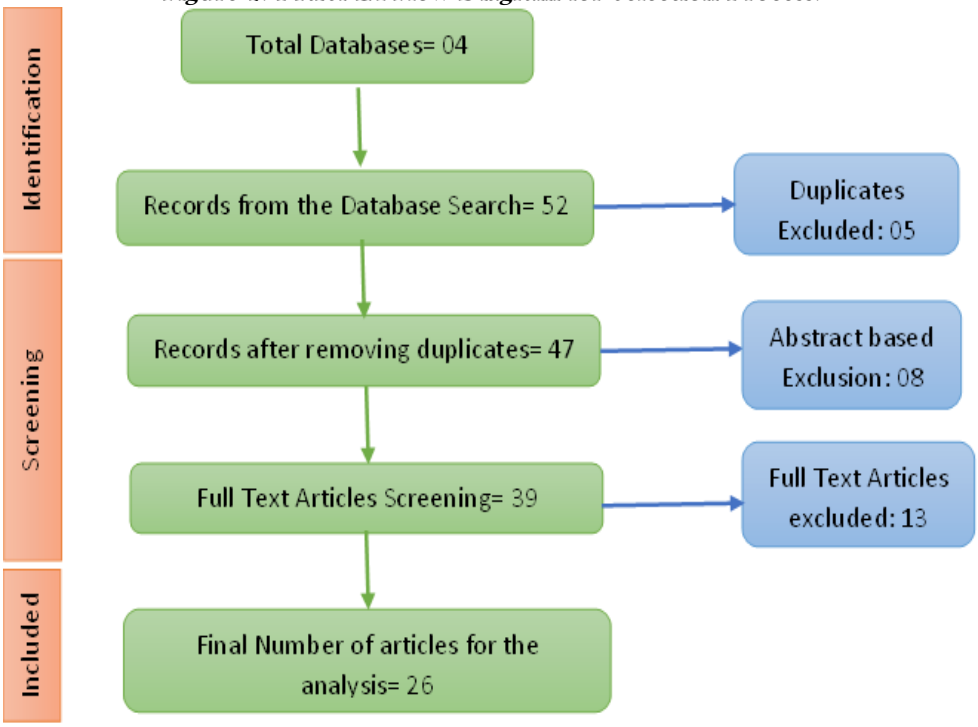
3.2. Article Selection

The preliminary search across various databases retrieved 52 articles, which were screened depending on the relevance to the research objectives. Articles were evaluated based on their focus on recommendation systems, AI driven algorithms, and user engagement within OTT platforms. Selection process is systematically presented in Figure 1. After applying the inclusion and exclusion criteria (see Table 1), 26 articles were selected for detailed review. By using this selection process, it enabled that only the studies which directly focused on user engagement, AI algorithms and content consumption were included, which increases the validity of this research and reinforces the review findings (Khanna et al., 2024)

Table 1. Inclusion and Exclusion Criteria for Selection of Articles

Inclusion	Exclusion
Studies involving OTT users and content curation	Studies not focused on OTT platforms consumption
Research on AI-driven algorithms	Use of non-algorithmic tools
Measures of user engagement or consumption trends	No engagement or consumption metrics studied
Peer-reviewed, empirical or review studies	Opinion pieces, editorials, or gray literature
Studies published between 2018-2025	Studies published before 2018
Studies in English language	Non-English studies or studies without translation available

Figure 1. PRISMA Flow Diagram for Selection Process.



3.3. Data Extraction

The selected studies for review comprised of different research methods, Table 2 provides an overview of the methodologies used by those studies. These studies were relevant as their major findings were related to AI algorithms and their influence on user engagement on OTT platforms. Most studies emphasized on how AI-driven algorithms facilitate personalized recommendations and content curation, as observed in popular platforms like Netflix, Hulu, and Amazon Prime Video (Gomez-Uribe & Hunt, 2015). Furthermore, the extraction considered theoretical frameworks pertinent to the research objectives, especially the filter bubble theory. This helped to assess how algorithmic personalization may restrict users' exposure to diverse content. In order to deepen the understanding of AI's impact on media consumption patterns, studies highlighting the ethical concerns surrounding algorithmic filtering, were also incorporated (Bozdag, 2013). Recurring themes such as user behavior, personalization strategies, and engagement dynamics across various OTT platforms were identified based on comprehensive data collection and analysis. The synthesized data provide insights into the dual role of AI driven algorithms in shaping both individual user experiences and broader media consumption trends within the OTT ecosystem.

Table 2. Overview of research methods used in the selected studies

Sr. No.	Methodology Type	Number of Studies
1.	Quantitative (Surveys, Experiments)	13
2.	Qualitative (Interviews, Thematic)	6
3.	Mixed Methods	3
4.	Systematic Review / Meta-analysis	2
5.	Conceptual / Theoretical Papers	2

4. Results and Analysis

This analysis is based on the selected studies chosen through the PRISMA systematic review process (See Figure 1). The selected studies focus on a variety of OTT services, which also include paid subscription-based video on demand (SVoD) platforms such as

Netflix and Amazon Prime Video, as well as free ad-supported streaming television (FAST) services like Pluto TV and Tubi. The selected literature explores how AI-driven algorithms are employed by these platforms to personalize content recommendations, enhance user engagement, and influence broader media consumption trends. Following table shows the consolidated findings of all the selected research articles:

Table 3. Literature Grid for Selected Studies

S.No.	Title	Authors (Year)	Platforms Studied	AI Feature Studied	User Engagement Results	Influence On Media Consumption
1	A Study on Exploring Consumer Engagement with AI-Driven Experiences on Netflix Streaming Platform	(Abishek & Keren Judi, 2025)	Netflix	AI-driven personalized recommendations	AI personalization significantly increases engagement by tailoring content to user preferences	Personalization fosters habitual consumption and longer viewing sessions
2	The Role of Artificial Intelligence in Enhancing User Experience on OTT Platforms	(Chahwala et al., n.d.)	Various OTT platforms	Recommendation algorithms	Enhanced user satisfaction through dynamic content curation	Algorithms shift consumption patterns towards more binge-watching and selective exposure
3	User Behaviors Analysis on OTT Platform with Technology Acceptance Model Integration	(Chen et al., 2023)	Multiple OTT platforms	AI-based user behavior analytics	Positive correlation between AI ease-of-use and engagement metrics	AI influences viewing habits by predicting preferred genres and times
4	Time-of-Day and Day-of-Week Effects on TV and OTT Media Choices	(Choi & Lee, 2024)	South Korean OTT platforms	Temporal personalization algorithms	Peak engagement aligns with personalized scheduling	AI modifies consumption timing, increasing media consumption during peak preferred periods
5	The Business Strategy Analysis of Netflix	(Hsiao, 2024)	Netflix	AI-powered recommendation systems	High user retention attributed to continuous AI-driven content updates	AI algorithms reinforce platform loyalty and alter media consumption trends towards exclusive content
6	Birds of a Feather Get Recommended Together: Algorithmic Homophily in YouTube's Recommendations	(Kaiser & Rauchfleisch, 2020)	YouTube	Algorithmic homophily	Users are shown content similar to prior preferences, increasing engagement	Leads to echo chambers narrowing user content diversity
7	Over-the-top (OTT) Platforms: A Review, Synthesis and Research Directions	(Khanna et al., 2024)	Multiple OTT platforms	AI-driven recommendation systems	AI enhances user stickiness and content discovery	Algorithms shape consumption by filtering and prioritizing content aligned with past behavior
8	The Impact of AI Recommendation Quality on Service Satisfaction	(Kim & Kim, 2025)	OTT services broadly	Recommendation quality assessment	Higher recommendation accuracy directly improves satisfaction and engagement	Improves media consumption through refined content relevance
9	Understanding Platform Strategies for	(Kour & Chhabria, 2022)	Multiple OTT platforms	Personalized content	AI-driven strategies significantly increase user retention	Influences long-term consumption habits and subscription renewal

	Consumer Stickiness on OTT Platforms			recommendations		
10	Accurately or Accidentally? Recommendation Agent and Search Experience	(Kwon et al., 2021)	Various OTT services	Recommendation agents	Mixed effects: accuracy boosts engagement but accidental recommendations reduce satisfaction	Alters consumption unpredictably, impacting user trust and viewing patterns
11	New Trends in Over the Top Media Service (OTT) Web User Behaviour Analysis	(Nguyen et al., 2023)	OTT platforms broadly	AI-driven user behavior prediction	Predictive AI identifies user patterns that correlate with higher engagement	Helps platforms optimize content delivery schedules
12	Review of Recommender System for OTT Platform through Artificial Intelligence	(Pattanayak & Shukla, 2021)	OTT platforms broadly	Recommender system algorithms	Improved recommendation systems correlate with increased engagement	Shapes media consumption by reinforcing user preferences
13	What Drives User Stickiness and Satisfaction in OTT Video Streaming Platforms?	(Periaiya & Nandukrishna, 2024)	Multiple OTT platforms	AI-based stickiness drivers	Personalization and ease of use drive higher engagement	Alters consumption by encouraging habitual platform use
14	Streaming Towards Innovation: Consumer Adoption of OTT Services	(Polisetty et al., 2023)	OTT platforms broadly	AI-powered recommendation and adoption	AI-enhanced recommendations improve adoption and engagement	AI impacts consumption by driving wider acceptance and habitual usage
15	Soulful Swings: A New Gen OTT	(A. R et al., 2025)	New Gen OTT platforms	AI-enabled personalized content	AI personalization increases emotional connection and user retention	Changes consumption by focusing on niche and emotional content delivery
16	User Experiences in Over-The-Top (OTT) Streaming Media Platform Services	(P. R. & S, 2025)	OTT platforms broadly	AI content curation	Personalized curation significantly boosts user engagement	Leads to consumption patterns favoring algorithmically recommended content
17	A Multi-Source Approach to Film Recommendations Using Social Media, Search Data, and Streaming History	(Raj et al., 2024)	OTT platforms broadly	Multi-source AI recommendation systems	Enhanced recommendations increase engagement by integrating diverse data sources	AI shapes consumption through comprehensive content curation strategies
18	Review on Revolutionizing Viewer Experience in the Role of Generative AI in FAST Platforms	(Ramagundam & Karne, 2024)	FAST platforms	Generative AI content creation	Generative AI improves user engagement via novel content experiences	Alters consumption patterns by introducing fresh, AI-created content
19	How Over-the-Top (OTT) Platforms Engage Young Consumers Over Traditional Pay Television	(Sadana & Sharma, 2020)	Multiple OTT platforms	Gamification and AI	AI combined with gamification increases youth engagement	Shifts media consumption from linear to interactive, AI-curated formats

20	Analysis of OTT Users' Watching Behavior for Identifying a Profitable Niche	(Shim et al., 2022)	Multiple OTT platforms	Latent class regression on AI data	Identification of niche segments increases targeted engagement	AI enables niche content promotion, diversifying consumption patterns
21	Why am I Seeing This? Deconstructing Algorithm Literacy Through the Lens of Users	(Shin et al., 2022)	OTT users broadly	Algorithmic literacy and transparency	Higher user algorithmic literacy correlates with informed engagement	Impacts media consumption by influencing trust and acceptance of AI recommendations
22	Dialogue Social Science Review: A Global Analysis of Netflix Content Production	(Tahir et al., n.d.)	Netflix	AI content production analytics	AI content production supports user satisfaction and engagement	AI shapes consumption by optimizing content creation aligned with audience preferences
23	Personalization of Content in Video-on-Demand Services: Insights from Satisfaction over Social Media Algorithms	(Urgellés-Molina & Herrero, 2024)	VOD and OTT platforms	Social media AI personalization	Personalized recommendations enhance satisfaction and prolonged engagement	Influences consumption patterns towards socially relevant content
24	Over-the-Top (OTT) Watching Behaviour of Consumers in Secunderabad	(Venkateswara et al., 2023)	OTT platforms broadly	AI-based behavioral analytics	Behavioral analytics assist in tailoring content, increasing user engagement	AI impacts media consumption by optimizing content suggestions
25	The Role of Artificial Intelligence in Enhancing User Experience on OTT Platforms	(Chahwala et al., n.d.)	OTT platforms broadly	AI-driven content recommendation	AI improves user satisfaction and retention	Alters consumption by driving habitual and personalized content usage
26	User Experiences in Over-The-Top (OTT) Streaming Media Platform Services	(P. R. & S, 2025)	OTT platforms broadly	AI-based content curation	Personalized content curation improves engagement	Consumption shifts towards algorithmically curated preferences

Across the 26 reviewed studies, a consistent trend emerges highlighting the dominance of AI-driven algorithms in shaping user behavior on OTT platforms. Selected studies show that most popular OTT platforms, such as Netflix, YouTube, and Amazon Prime, leverage AI features like collaborative filtering, content-based filtering, and hybrid recommendation systems to curate personalized viewing experiences (Kwon et al., 2021; Urgellés-Molina & Herrero, 2024). These features have enhanced user satisfaction and engagement by aligning content recommendations with individual preferences. Research shows that personalization increases watch times, user retention, and overall platform loyalty (Periaiya & Nandukrishna, 2024) Additionally, immersive approaches such as integration of VR and emotional analytics (Venkateswara et al., 2023) suggest that AI improves utility-based engagement and enables deeper affective and interactive consumption patterns.

The literature review indicates that AI integration in OTT platforms has greatly changed user behaviors in content consumption and engagement. The users are no longer mere passive viewers but active participants in the highly curated digital environments where algorithms fueled by AI hold a key to decision-making. By closing the content-user gap, OTT platforms have boosted user experience and platform loyalty through the integration of such features as emotional AI, hybrid recommender systems and contextual content

presentation (Periaiya & Nandukrishna, 2024). AI-based personalization has redefined consumption habits by imposing behaviors such as binge-watching and habit-based content choice.(Choi & Lee, 2024). While AI elevates engagement, it also produces algorithmic homophily where users are repeatedly exposed to familiar genres or ideological content which potentially limits content diversity and user agency (Kaiser & Rauchfleisch, 2020). The reviewed articles raise concerns about user awareness of how these algorithms function and how recommendations are generated (Shin et al., 2022). Moreover, regional disparities, underexplored FAST (Free Ad-Supported Streaming TV) services, and long-term behavioral impacts remain under-researched areas. These gaps highlight the need for more comparative and longitudinal researches to understand how AI is not only engaging users in the short term but shaping media consumption habits over time.

4.1. Influence of AI-driven algorithms on user engagement on OTT platforms

AI-driven algorithms enhance engagement on OTT services through personalized content and an improved user experience. Kim & Kim (2025) reported that AI-driven recommendations increased user satisfaction and use of the platform. On a similar note, Kwon et al. (2021) highlighted that these recommendation algorithms enhance search experiences and lead to longer-term usage. Periaiya & Nandukrishna (2024) observed how AI platforms that provide personalized suggestions and feedback increase users' willingness to remain on a platform because of enhanced satisfaction and ease. Nguyen et al. (2023) also pointed out how predictive AI functionalities promote sustained engagement through content delivered in accordance with individual behavior patterns.

Other research emphasizes how certain AI techniques encourage greater user engagement. Polisetty et al. (2023) demonstrated that if users find AI systems helpful and simple to engage with, their level of engagement rises. Study discovered that AI-recommended content services improve the experience of the user by providing timely and pertinent content (P. R. & S, 2025). Kour & Chhabria (2022) concluded that strategic personalization using AI enhances consumer stickiness as well as user loyalty. Shim et al. (2022) demonstrated that using AI-powered behavioral segmentation allows platforms to better target niche audiences. Collectively, these studies suggest that AI is not only improving recommendation quality but also shaping how users interact with and remain committed to OTT platforms.

Table 4. Literature Grid for User Engagement on OTT Platforms

S.No.	Authors (Year)	Platform/Context	AI Technique(S)	Key Findings on User Engagement
1	Kim & Kim, (2025)	Various streaming platforms	AI recommendation systems	Higher recommendation quality improves user satisfaction and service engagement.
2	Kwon et al. (2021)	OTT platforms (general)	Recommendation agent algorithms	Search experience and algorithm accuracy significantly affect continued user engagement.
3	Periaiya & Nandukrishna (2024)	OTT video streaming platforms	AI-based recommendation and feedback systems	User stickiness and satisfaction are influenced by interactive AI-driven features.
4	Nguyen et al. (2023)	OTT web platforms	AI for user behavior analysis and unethical user prediction	User engagement increases with personalized and predictive content delivery.
5	Polisetty et al. (2023)	OTT services	IRT and TAM integrated AI models	User adoption is strongly linked to perceived ease and usefulness of AI features.

6	P. R. & S (2025)	Streaming media services	AI-curated content services	User experience is enhanced through timely and relevant content recommendations.
7	Kour & Chhabria (2022)	OTT platforms	Platform strategy using AI	Consumer stickiness is supported by strategic use of AI to deliver personalized user journeys.
8	Shim et al. (2022)	OTT platforms	Latent class regression for behavioral segmentation	AI enables niche identification, enhancing targeted engagement.

4.2. Impact of AI algorithms on media consumption patterns on streaming platforms

AI algorithms have changed the way people consume media on streaming platforms. (Choi & Lee, 2024) found that users tend to watch more content on weekends and at night, following patterns encouraged by the platform. (Hsiao, 2024) showed that Netflix uses data and regional preferences to push certain types of content, which influences global viewing habits. (Ramagundam & Karne, 2024) discussed how generative AI helps platforms offer quick and adaptive content, which supports short-form viewing and binge-watching. (Kaiser & Rauchfleisch, 2020) warned that YouTube's algorithm often recommends similar content, limiting variety and promoting repeated themes.

Other studies highlight how AI keeps users engaged over time. (Kim & Kim, 2025) found that better recommendation quality improves user satisfaction and keeps users watching. (Pattanayak & Shukla, 2021) noted that AI mixes user history and popular content to suggest what to watch next, which can lead to limited content choices. (Sadana & Sharma, 2020) observed that young viewers in India prefer OTT platforms due to fun and interactive recommendations. (Venkateswara et al., 2023) also found that mobile-based viewing and personal suggestions have increased daily watch time. Lastly, (Urgellés-Molina & Herrero, 2024) stated that users enjoy platforms more when content feels relevant, which encourages longer and more frequent viewing. Together, these studies show that AI does more than recommend it shapes how, when, and what users watch.

Table 5. Literature Grid for Media Consumption Trends on OTT Platforms

S.No.	Authors (Year)	Platform/Context	AI Technique(S) Studied	Key Findings on Media Consumption Patterns
1	Choi & Lee (2024)	TV & OTT (South Korea)	Predictive analytics, behavioral profiling	Found strong "Friday" and late-night effects in OTT usage; AI recommendations influence viewing time and platform selection.
2	Hsiao (2024)	Netflix	Machine learning & big data analytics	AI supports Netflix's global expansion and content localization; affects viewing trends across regions.
3	Ramagundam & Karne (2024)	FAST platforms	Generative AI, predictive models	GenAI reshapes content delivery and timing; enhances contextual media consumption based on user habits.
4	Kaiser & Rauchfleisch (2020)	YouTube	Recommendation algorithms	Reinforces ideological exposure patterns; users consume homophilous content, narrowing diversity.
5	Kim & Kim (2025)	General OTT	Customization and standardization filters	Personalization impacts continuous use intention and strengthens habitual consumption.

6	Pattanayak & Shukla (2021)	Netflix, Prime Video, YouTube	Hybrid recommendation systems	AI increases repeat viewing, impacts content variety; potential echo chambers noted.
7	Sadana & Sharma (2020)	Indian OTT users	Gamified recommendations	Younger audiences prefer OTT due to personalized suggestions; shifts away from linear TV patterns.
8	Venkateswara et al. (2023)	Indian OTT (Secunderabad)	Not explicitly named, implied recommendation	OTT consumption increases due to mobile penetration and content personalization; users watch 4+ hours/day.
9	Urgellés-Molina & Herrero (2024)	VOD & Social Media Algorithms	Algorithmic personalization	Custom algorithms influence binge-watching and platform loyalty; user satisfaction linked with personalized suggestions.

4.3. Filter Bubble Effects and Ethical Concerns

4.3.1. Algorithmic Homophily and Content Repetition

Several researches explain how recommendation systems based on AI keep enhancing user preferences by consistently recommending similar content types. Such a trend, termed algorithmic homophily, can restrict content variety in the long run (Kaiser & Rauchfleisch, 2020). In an experiment on YouTube, revealed that users tended to be steered towards channels with common perspectives, which could be responsible for echo chambers. Similarly, Pattanayak & Shukla, (2021) established that recommendation algorithms on OTT platforms utilize user history and trending material to prioritize well-known suggestions, possibly limiting exposure of users to new or diverse media. Although this heightens participation, it limits the scope of media users view, shaping their long-term media behaviors.

4.3.2. User Awareness and Algorithmic Literacy

The research further shows that although these algorithmic platforms have gained popularity but numerous users are unaware of how exactly these systems work and frequently have misconceived notions about how their recommendations are personalized for them (Shin et al., 2022). This ignorance leads them to downplay the degree to which their use is controlled by these algorithms. The filter bubbles formed by these algorithms restrict the audience exposure to specific content. This hampers their ability to experience a variety of content and be aware of what they miss. It also restricts their ability to make informed choices regarding the content they consume. Subscribers usually view their content feeds as objective without realizing that algorithms are shaping content according to past engagement. This can result in strengthening established beliefs and isolation from alternative views. To reverse this impact algorithmic transparency must be enhanced and media literacy is essential in order to increase user agency and minimize passive consumption. (Kaiser & Rauchfleisch, 2020)

Conclusion

This review study provides a synthesis of findings from 26 peer-reviewed articles which helps us to understand the influence of AI on user engagement and media consumption patterns on OTT platforms. Research findings present that AI enhances personalization which not only significantly increases user satisfaction but also keeps them engaged especially on platforms like Netflix and YouTube (Kim & Kim, 2025; Kwon et al., 2021; Periaiya & Nandukrishna, 2024). AI-based recommendation systems that were significant to improving content delivery and streamlining user experience were based on collaborative filtering and machine learning models (Pattanayak & Shukla, 2021; Nguyen et al., 2023).

Filter bubble effects of these algorithms raises concerns regarding exposure of audience to similar content, creating a tunnel vision and thus limiting the variety of content consumed. Other ethical considerations include transparency and user autonomy to choose content from varied options. Studies also reveal that these filtered bubbles are due to algorithmic homophily, and limited user awareness

of algorithmic functions (Kaiser & Rauchfleisch, 2020; Shin et al., 2022).

This study also highlights the need of cross-platform comparative analysis for an in depth study of the impact of these AI driven algorithms on OTT platforms. Also, research on regional AI adaptation, and longitudinal research on how algorithms reform long-term viewing behaviors is required. Future research should also explore the impact of AI in emerging FAST (Free Ad-Supported Streaming TV) platforms and further investigate user control in algorithm-driven environments (Ramagundam & Karne, 2024).

References

Abishek, N., & Keren Judi, E. (2025). A Study on Exploring Consumer Engagement with Ai-Driven Experiences on Netflix Streaming Platform. *International Conference on Artificial Intelligence in Commerce and Management*, 93–100. https://doi.org/10.34293/ICAICM-25.ch013

Bozdag, E. (2013). Bias in algorithmic filtering and personalization. *Ethics and Information Technology*, *15*(3), 209–227. https://doi.org/10.1007/s10676-013-9321-6

Chahwala, K., Shubham, C., Zalariya, N., Dhruv, A., Shah, A. R., Chauhan, R., & Maseleno, A. (n.d.). *The Role of Artificial Intelligence in Enhancing User Experience on OTT Platforms*. https://doi.org/10.38035/gijes.v2i4

Chen, C. H., Chen, I. F., Tsaur, R. C., & Chui, L. Y. (2023). User behaviors analysis on OTT platform with an integration of technology acceptance model. *Quality and Quantity*, *57*(6), 5673–5691. https://doi.org/10.1007/s11135-023-01623-w

Choi, Y. W., & Lee, C. (2024). Time-of-Day and Day-of-Week Effects on TV and OTT Media Choices: Evidence from South Korea. *Journal of Theoretical and Applied Electronic Commerce Research*, *19*(1), 1–19. https://doi.org/10.3390/jtaer19010001

Dubovi, I., & Tabak, I. (2021). Interactions between emotional and cognitive engagement with science on YouTube. *Public Understanding of Science*, *30*(6), 759–776. https://doi.org/10.1177/0963662521990848

Fieiras-Ceide, C., Vaz-álvarez, M., & Túñez-López, M. (2023). Designing personalisation of European public service media (PSM): trends on algorithms and artificial intelligence for content distribution. *Profesional de La Informacion*, *32*(3). https://doi.org/10.3145/epi.2023.may.11

Gomez-Uribe, C. A., & Hunt, N. (2015). The netflix recommender system: Algorithms, business value, and innovation. *ACM Transactions on Management Information Systems*, *6*(4). https://doi.org/10.1145/2843948

Hsiao, Y.-H. (2024). The Business Strategy Analysis of Netflix. In *Transactions on Social Science, Education and Humanities Research* (Vol. 11).

Kaiser, J., & Rauchfleisch, A. (2020). Birds of a Feather Get Recommended Together: Algorithmic Homophily in YouTube's Channel Recommendations in the United States and Germany. *Social Media and Society*, *6*(4). https://doi.org/10.1177/2056305120969914

Khanna, P., Sehgal, R., Gupta, A., Dubey, A. M., & Srivastava, R. (2024). Over-the-top (OTT) platforms: a review, synthesis and research directions. In *Marketing Intelligence and Planning*. Emerald Publishing. https://doi.org/10.1108/MIP-03-2023-0122

Kim, S. Y., & Kim, J. (2025). The impact of AI recommendation quality on service satisfaction: the moderating roles of standardization and customization. *Journal of Services Marketing*. https://doi.org/10.1108/JSM-05-2024-0214

Kour, G., & Chhabria, B. (2022). Understanding platform strategies for consumer stickiness on OTT platforms. *Journal of Indian Business Research*, *14*(4), 540–555. https://doi.org/10.1108/JIBR-04-2021-0122

Kumari, P., Kumar, V., Utpal, J., Scholar, P. D., & Singh, K. (n.d.). *Recent Trends and Future Prospects of Artificial Intelligence in Indian Media*. *53*(7). https://www.researchgate.net/publication/383531148

Kwon, Y., Park, J., & Son, J. Y. (2021). Accurately or accidentally? Recommendation agent and search experience in over-the-top (OTT) services. *Internet Research*, *31*(2), 562–586. https://doi.org/10.1108/INTR-03-2020-0127

Milano, S., Taddeo, M., & Floridi, L. (2020). Recommender systems and their ethical challenges. *AI and Society*, *35*(4), 957–967. https://doi.org/10.1007/s00146-020-00950-y

Nguyen, H. H. C., Grzonka, D., Khoa, B. T., Sagar, K. V. D., Abbasi, I. A., Mahaveerakannan, R., & Alkhayyat, A. (2023). New Trends in Over the Top Media Service (OTT) Web User Behaviour Analysis and Unethical User Prediction. *Mobile Networks and Applications*. https://doi.org/10.1007/s11036-023-02214-7

Nguyen, T. T., Hui, P. M., Harper, F. M., Terveen, L., & Konstan, J. A. (2014). Exploring the filter bubble: The effect of using recommender systems on content diversity. *WWW 2014 - Proceedings of the 23rd International Conference on World Wide Web*, 677–686. https://doi.org/10.1145/2566486.2568012

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. In *The BMJ* (Vol. 372). BMJ Publishing Group. https://doi.org/10.1136/bmj.n71

Pattanayak, S., & Shukla, V. K. (2021). Review of Recommender System for OTT platform through Artificial Intelligence. *2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions), ICRITO 2021*. https://doi.org/10.1109/ICRITO51393.2021.9596297

Periaiya, S., & Nandukrishna, A. T. (2024). What Drives User Stickiness and Satisfaction in OTT Video Streaming Platforms? A Mixed-Method Exploration. *International Journal of Human-Computer Interaction*, *40*(9), 2326–2342. https://doi.org/10.1080/10447318.2022.2160224

Polisetty, A., Sowmya, G., & Pahari, S. (2023). Streaming towards innovation: Understanding consumer adoption of OTT services through IRT and TAM. *Cogent Business and Management*, *10*(3). https://doi.org/10.1080/23311975.2023.2283917

R, A., Bardia, D., Ojha, A., & Sah, P. (2025). *Soulful Swings: A New Gen OTT*. https://doi.org/10.36227/techrxiv.173931108.89812460/v1

R., P., & S, S. (2025). User Experiences in Over-The-Top (OTT) Streaming Media Platform Services. *Qubahan Academic Journal*, *5*(2), 82–99. https://doi.org/10.48161/qaj.v5n2a1600

Raj, J. R. F., Karthikeyan, M. S., Rajkumar, G. V., Shankar, S. V., Isaac, R. A., & Anushya, S. T. (2024). A Multi-Source Approach to Film Recommendations using Social Media, Search Data, and Streaming History. *5th International Conference on Sustainable Communication Networks and Application, ICSCNA 2024 - Proceedings*, 1264–1271. https://doi.org/10.1109/ICSCNA63714.2024.10864017

Ramagundam, S., & Karne, N. (2024). Review on Revolutionizing Viewer Experience in the Role of Generative AI in FAST Platforms. *2nd International Conference on Self Sustainable Artificial Intelligence Systems, ICSSAS 2024 - Proceedings*, 18–24. https://doi.org/10.1109/ICSSAS64001.2024.10760469

Sadana, M., & Sharma, D. (2020). How over-the-top (OTT) platforms engage young consumers over traditional pay television service? An analysis of changing consumer preferences and gamification. *Young Consumers*, *22*(3), 348–367. https://doi.org/10.1108/YC-10-2020-1231

Schaap, G., Bosse, T., & Hendriks Vettehen, P. (2024). The ABC of algorithmic aversion: not agent, but benefits and control determine the acceptance of automated decision-making. *AI and Society*, *39*(4), 1947–1960. https://doi.org/10.1007/s00146-023-01649-6

Shim, D., Lee, C., & Oh, I. (2022). Analysis of OTT Users' Watching Behavior for Identifying a Profitable Niche: Latent Class Regression Approach. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(4), 1564–1580. https://doi.org/10.3390/jtaer17040079

Shin, D., Rasul, A., & Fotiadis, A. (2022). Why am I seeing this? Deconstructing algorithm literacy through the lens of users. *Internet Research*, *32*(4), 1214–1234. https://doi.org/10.1108/INTR-02-2021-0087

Singh, P., Srivastava, G., Singh, S., & Kumar, S. (n.d.). INTELLIGENT MOVIE RECOMMENDER FRAMEWORK BASED ON CONTENT-BASED & COLLABORATIVE FILTERING ASSISTED WITH SENTIMENT ANALYSIS. *International Journal of Advanced Research in Computer Science*, *14*(3). https://doi.org/10.26483/ijarcs.v14i3.6979

Tahir, T., Qasim Maqbool, K., Zafar, S., Zulkifl Hasan, M., Zunnurain Hussain, M., & Atif Yaqub, M. (n.d.). *Dialogue Social Science Review (DSSR) A Global Analysis of Netflix Content Production Unveiling Dominant Countries and Industry Trends*. www.thedssr.com

Tan, Y., & Yoon, S. (2024). Testing the effects of personalized recommendation service, filter bubble and big data attitude on continued use of TikTok. *Asia Pacific Journal of Marketing and Logistics*. https://doi.org/10.1108/APJML-06-2024-0738

Urgellés-Molina, A., & Herrero, M. (2024). Personalization of Content in Video-on-Demand Services: Insights from Satisfaction over Social Media Algorithms. *ComHumanitas: Revista Científica de Comunicación*, *15*(2), 175–187. https://doi.org/10.31207/rch.v15i2.456

Venkateswara, M., Neerati, R., & Immanuvel, D. (2023). Over-the-Top (OTT) Watching Behaviour of Consumers in Secunderabad. In *Tuijin Jishu/Journal of Propulsion Technology* (Vol. 44, Issue 4).

Zhang, Q., Lu, J., & Jin, Y. (2021). Artificial intelligence in recommender systems. *Complex and Intelligent Systems*, *7*(1), 439–457. https://doi.org/10.1007/s40747-020-00212-w.