



Data-Driven Entertainment: How Algorithms Shape Viewing Preferences on Netflix Indonesia

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Abstract. This study examines how algorithmic recommendation systems shape audience viewing preferences on Netflix Indonesia within the broader context of data-driven entertainment and platform culture. Using Big Data Analytics approach with Exploratory Data Analysis (EDA), this research analyzes Netflix datasets obtained from Kaggle to identify patterns in content visibility, genre dominance, rating distribution, local content representation, and audience retention strategies. The findings reveal that Netflix's algorithmic system does not operate neutrally but prioritizes emotionally engaging genres such as dramas, romantic movies, and international movies to maximize user engagement and attention retention. The analysis also shows that content ratings are heavily dominated by TV-14, TV-PG, and TV-MA categories, indicating a strategic focus on adolescent and young adult audiences with high digital media consumption intensity. Furthermore, local Indonesian content tends to reproduce repetitive emotional themes such as love, friendship, family, and personal struggle, demonstrating how global OTT platforms repackage local culture into platform-friendly narratives compatible with transnational algorithmic logic. From a communication perspective, the study confirms that Netflix functions not merely as a content distributor but as a cultural institution that actively shapes audience preferences, emotional experiences, and symbolic meanings through algorithmic curation. This research contributes theoretically to discussions on algorithmic culture, algorithmic gatekeeping, and platformization while also demonstrating the methodological relevance of EDA in digital communication studies. The study concludes that OTT algorithms increasingly influence cultural consumption patterns and contribute to the homogenization of digital media experiences in contemporary society.

Keywords: Netflix; Algorithmic Culture; OTT Platform; Exploratory Data Analysis; Audience Preferences

1 INTRODUCTION

The rapid development of over-the-top (OTT) platforms has fundamentally changed global media consumption practices [1], [2], [3], [4], [5], [6]. In contrast to traditional broadcasting systems, digital streaming platforms operate through algorithm-based infrastructure that curates, personalizes, and prioritizes content visibility in real time [7], [8], [9]. Netflix, as one of the most dominant global OTT providers, is a prime example of this transformation by placing an algorithmic recommendation system at the core of its communication architecture [10], [11], [12], [13]. The transformation also marks a shift from a linear television model to internet-distributed television, where the viewing experience is shaped through access, personalization, and subscription-based consumption flexibility [14], [15], [16]. These systems not only distribute audiovisual content, but also actively mediate cultural exposure and shape how audiences interact with narratives, genres, and symbolic meanings in the digital media environment [17].

The growing reliance on algorithmic personalization has shifted media consumption from editorial logic to data-driven logic. In this environment, audience preferences are constantly identified, predicted, and recalibrated based on user behavior data, including watch duration, genre interaction, and user engagement patterns [18], [19], [20]. As a result, algorithms serve as a new form of gatekeeper that replaces human decision-making with automated systems that determine cultural visibility at scale [21], [22], [23]. This shift raises fundamental questions in the study of communication related to agency, power, and the construction of tastes in a platform-mediated media environment [24], [25], [26].

Academics increasingly conceptualize this phenomenon as algorithmic culture, which is the increasing influence of computational systems in organizing cultural circulation and the process of forming meanings [17], [27], [28]. In OTT platforms, algorithms determine not only what content is recommended, but also which narratives continue to be amplified, which genres dominate, and what forms of storytelling become normal. Thus, media platforms are no longer just passive intermediaries, but have become active cultural institutions that shape the audience's imagination and social discourse [29], [30], [31].

Although studies on algorithm governance and platform power continue to grow, much of the existing literature is still centered on Western contexts, particularly North America and Europe [10], [32], [33]. These studies generally emphasize the political economy of platforms, digital labor relations, or regulatory frameworks, while empirical studies of the influence of algorithms on audience preferences in non-Western societies are relatively limited [34], [35], [36]. This inequality limits the global relevance of existing theories and ignores how algorithmic systems operate in culturally diverse media ecologies.

In Southeast Asia, especially Indonesia, OTT platforms have experienced very rapid growth in the past decade. Indonesia is one of the largest digital markets in the Global South with high internet penetration, a dominant young population, and increasing consumption of subscription-based media [34]. Netflix's presence in Indonesia introduces new viewing practices such as on-demand consumption, binge-watching, and algorithm-based recommendation interfaces [11], [33], [37]. Amanda D. Lotz (2007) explains that streaming services like Netflix have changed the definition

of television from a schedule-based medium to a media experience that is flexible, personalized, and integrated with everyday digital culture (A. D. Lotz, 2005; A. D. Lotz & Ross, 2004). In addition, the increasing use of mobile devices and digital media culture among the younger generation is accelerating the transformation of national entertainment consumption patterns [32], [40].

The transformation of television to an internet-based service is also changing the relationship between audiences, content distribution, and media institutions[41]. According to Lotz (2017), OTT platforms such as Netflix no longer operate as "television channels" in the traditional sense, but rather as portals that connect users with algorithm-based content catalogs and behavioral data [14]. In this context, algorithms are not only a technical tool, but an integral part of the platform's business model that aims to retain users' attention and increase the duration of media consumption [23], [33], [42]. This perspective shows that the study of Netflix cannot be separated from the changing structure of global television and contemporary digital consumption culture [13], [43], [44].

Media studies in Indonesia have so far focused more on regulatory debates, censorship issues, and competition between OTT platforms and conventional broadcasting [45] [30], [40] [48]. While this perspective is important, platforms tend to be positioned only as institutional actors, rather than as communication systems embedded in algorithmic logic. As a result, the everyday cultural impact of recommendation systems how audiences are subtly directed to specific genres, ratings, and narrative forms has not been widely explored through empirical data analysis [19], [20]. In fact, algorithms do not work neutrally, but rather have the capacity to form a hierarchy of visibility and user cultural preferences [18], [24], [49].

In addition, methodological limitations are still a challenge in communication research on digital platforms. Many studies rely on qualitative interviews or policy analysis, which do provide important insights, but have limitations in empirically displaying the content structure of platforms [20], [29], [50], [51]. Because algorithms work through large-scale data environments, understanding their influences requires a methodological approach capable of detecting patterns, repetitions, and structural tendencies in the platform's catalog. Exploratory Data Analysis (EDA) offers this potential by allowing researchers to identify meaningful trends without having to be tied to rigid hypotheses from the beginning of the study [52], [53], [54].

Nevertheless, EDA is still rarely used in communication and media studies, especially when it comes to OTT platforms. When computational approaches are used, analysis is often detached from cultural interpretation, resulting in a technically rich but theoretically poor study [29], [55], [56]. This separation creates a methodological gap between data science and communication theory, which ultimately limits interdisciplinary integration in digital platform research. On the other hand, the increasing complexity of OTT recommendation systems demands an approach that is able to combine the power of data analysis with socio-cultural interpretation [17], [44].

To answer this gap, this study uses an Exploratory Data Analysis approach combined with interpretive communication analysis to examine Netflix content trends in Indonesia. Instead of viewing data visualization as a purely descriptive tool, this study conceptualizes EDA as an interpretive instrument capable of uncovering how algorithmic systems shape cultural visibility. By analyzing the distribution of content types, genre dominance, rating classification, and narrative repetition patterns, this

study seeks to uncover the communication logic embedded in Netflix's algorithmic ecosystem [20], [28], [33]

The novelty of this research lies in the integration between computational analysis and the critical perspective of communication. If previous research tended to discuss algorithms in the abstract, this study grounded the concept of algorithmic culture through empirically observable platform data. By focusing the research on Indonesia as a context of the Global South, this study also expands the platform theory that has tended to center on Western experiences, while showing how global algorithms interact with local cultural consumption patterns [10], [32], [34]

Furthermore, this study makes a methodological contribution by showing that EDA can serve as a legitimate approach in communication research. Instead of replacing qualitative interpretation, data-driven analysis is used to strengthen theoretical understanding regarding the formation of audience preferences in algorithmic mediation. This hybrid approach answers the need for a more empirical study of the power of platforms and digital culture [20], [33], [57].

Theoretically, this research contributes to the debate on algorithmic gatekeeping, attention economy, and cultural homogenization by showing how recommendation systems reinforce specific genres and narrative structures. These findings broaden the understanding of algorithms as communicative actors that help shape cultural norms, not just reflect user demands [18], [28], [58]. At the same time, the study also highlights how streaming platforms operate as a global cultural infrastructure that influences the dynamics of local media production and consumption [30], [31]

Practically, this research provides implications for media governance and platform accountability. As OTT platforms increasingly shape public culture, an understanding of algorithmic influences is becoming important for policymakers, regulators, and media academics. By uncovering how visibility and preferences are algorithmically shaped, this research supports the need for greater transparency and culturally sensitive platform governance in emerging digital markets [12], [33], [35], [59]. In addition, the results of this study can be a reference for the local creative industry in understanding the distribution patterns and exposure of content in the global OTT ecosystem.

2 METHOD

This study uses a quantitative approach with the Big Data Analytics method through the Exploratory Data Analysis (EDA) technique to analyze content consumption patterns and algorithmic trends on the Netflix platform in Indonesia [23], [27], [44], [53], [60] [61]. The Big Data Analytics approach is used because the research focuses on processing large amounts of digital data originating from the data-driven platform ecosystem [33], [62], [63] [44], [64]. In the context of digital media studies, this approach allows researchers to identify content distribution patterns, genre dominance, as well as visibility structures formed by algorithmic recommendation systems [20], [28]. This approach is also relevant to understand television's transformation towards internet-distributed television driven by personalization and automation of digital platforms [10], [16], [55], [65].

EDA was first introduced by John Tukey as an approach to exploring patterns, anomalies, relationships, and trends in data without having to be constrained by rigid hypotheses from the beginning of research [53]. In contemporary digital media research, EDA is increasingly used because it is able to uncover hidden structures in the dataset of digital platforms and social media [54]. The use of EDA in this study allows for a more flexible and interpretive visualization of Netflix content trends, particularly in looking at how algorithms shape cultural exposure and audience preferences [17], [57]

The source of the research data comes from publicly available datasets through the Kaggle platform [66]. The use of digital platform-based Kaggle datasets is a common practice in computational communication research and platform studies because it allows the systematic analysis of media distribution patterns [10], [20], [62], [67], [68] [69], [70] . In addition, the public dataset from Kaggle also provides better transparency and replication of data in digital analytics-based research [54], [63].

Table 1. Dataset Netflix

No.	Dataset Title	Format	Year of Release	Source	Capacity
1.	20241227globaldata	CSV	27/12/2024	kaggle.com	983 KB
2.	all-week-global	CSV	27/12/2024	kaggle.com	524 KB
3.	netflix_titles	CSV	27/09/2021	kaggle.com	3.4 MB

Source: Kaggle.com, 2024

The dataset contains Netflix content metadata that includes various variables such as content title, type of content (movie or TV show), country of production, year of release, date the content was added to the platform, age rating, duration of view, and genre category.

Table 2. Structure of Dataset 1 and Dataset 2

No.	Data Available	Remarks
1	<i>week</i>	The date of the week the data was collected.
2	<i>Category</i>	Content category (e.g., Films (English)).
3	<i>weekly_rank</i>	Weekly ratings of content.
4	<i>show_title</i>	Title of the event/movie.
5	<i>season_title</i>	Season title (if any).
6	<i>weekly_hours_viewed</i>	Total weekly watch hours.
7	<i>runtime</i>	Content duration (in hours).
8	<i>weekly_views</i>	Total weekly viewership.
9	<i>cumulative_weeks_in_top_10</i>	The number of weeks of content is in the top 10.
10	<i>is_staggered_launch</i>	Whether the content is rolled out gradually.
11	<i>runtime_override_flag</i>	Information about the runtime (override flag).
12	<i>episode_launch_dtls</i>	Episode launch details.

Source: Kaggle.com, 2024

To create comprehensive digital research, it is considered necessary to analyze more than 1 dataset. The following is the structure of dataset 3 that the author used in this research:

Table 3. Dataset Structure 3

No.	Data Available	Remarks
1	<i>Content ID (show_id)</i>	A unique identifier for each title in the Netflix catalog.
2	<i>Content Type (type)</i>	Content categories, whether in the form of movies (Movies) or television series (TV Shows).
3	<i>Title</i>	The name or title of the content available.
4	<i>Director</i>	The name of the director involved in the production of the content.
5	<i>Cast</i>	List of actors and actresses who appear in the content.
6	<i>Country of Origin</i>	The country where the content was produced.
7	<i>Date Added (date_added)</i>	The time the content is added to the Netflix catalog.
8	<i>Release Year (release_year)</i>	The year the content was first released.
9	<i>Rating (rating)</i>	Age classification for audiences (e.g., TV-MA, PG-13, etc.).
10	<i>Duration</i>	The length of a movie in minutes or the number of seasons for a television series.
11	<i>Category/Genre (listed_in)</i>	The main genre or category of the content.
12	<i>Description</i>	A summary or overview of the content.

Source: Kaggle.com, 2024

The stages of data collection and processing are carried out through several analytical processes. First, the dataset is downloaded and processed using the Python programming language on the Google Colab platform. Python was chosen because it has strong capabilities in big data processing, data visualization, and statistical analysis based on libraries such as Pandas, NumPy, Matplotlib, and Seaborn [54], [68], [71]. Furthermore, a data cleaning process is carried out to remove duplicate data, handle missing values, standardize date formats, and normalize data categories so that the dataset is ready for analysis [71], [72]. This process is important to maintain the validity and consistency of large-scale digital data analysis results [53], [62].

The next stage is the process of data exploration and visualization. At this stage, an analysis was carried out on the distribution of content types, genre distribution, age rating classification, content growth trends by year, and the dominance pattern of certain categories in the Netflix Indonesia catalog. Visualization is done using bar charts, heatmaps, word clouds, and temporal graphs to identify trends in content distribution patterns [64], [67], [68], [72]. Data visualization is positioned not only as a descriptive tool, but also as an interpretive medium to understand algorithmic logic and patterns of cultural visibility within OTT platforms [33], [57], [69]

3 **RESULT AND DISCUSSION**

3.1 **Algorithmic Personalization and Content Visibility**

One of the key findings in the study relates to the disparity in the visibility of content in the Netflix catalog. Based on the results of Exploratory Data Analysis on the global and Indonesian Netflix datasets, it was found that certain titles, genres, and production origins appeared to be more dominant than other categories. This pattern shows that the distribution of content visibility on OTT platforms does not take place neutrally, but rather is formed through algorithmic prioritization mechanisms that work based on user behavior data. In the context of digital platforms, algorithms are not only in charge of organizing information, but also determining which content is more likely to be consumed, recommended, and retained in the audience's attention [17], [20], [28]. Thus, Netflix's recommendation system can be understood as a new form of algorithmic gatekeeping that replaces the traditional editorial selection function in the digital media industry.

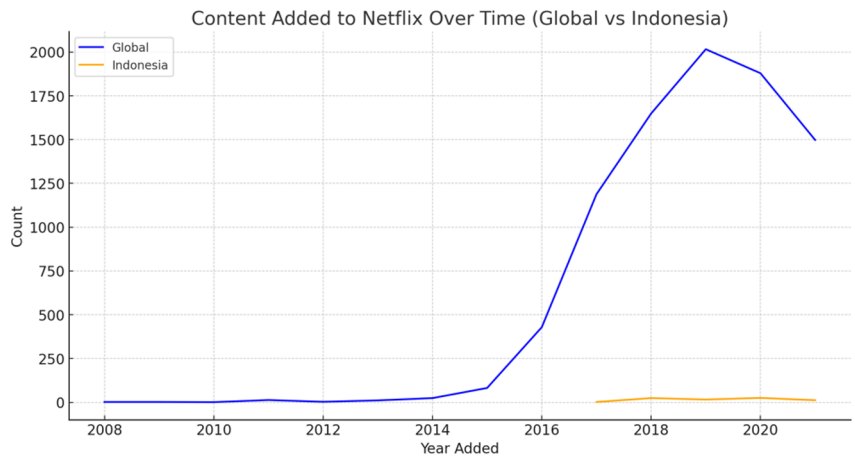


Figure 1. Netflix Content Added Over Time (Global vs Indonesia)

The visualization in Figure 1 shows a very significant increase in the amount of content added to Netflix globally after 2015, with the highest spike occurring in the 2017–2020 period. This phenomenon coincides with Netflix's aggressive expansion into various international markets, including Indonesia. The data also shows that Indonesia's content growth has begun to appear more consistent since 2017, although the scale is still much smaller than the global catalog. These findings show how OTT platforms work through a data-driven expansion strategy, where content addition is done intensively to expand user retention and increase the duration of media consumption [10], [14]. However, this growth does not occur linearly across all content categories. The algorithm seems to prioritize the types of content that have a high level of engagement,

especially genres with the potential for binge-watching and strong emotional engagement.

From the perspective of digital media communication, this condition reflects a major transformation in the practice of gatekeeping[73]. In conventional media, the information selection process is carried out by editors and media institutions. In contrast, in the OTT ecosystem, algorithms take over these functions through automated processes that work continuously based on user behavior history, click patterns, watch duration, and certain genre trends [19], [20]. In other words, the algorithm not only predicts the audience's preferences, but also reinforces those preferences through the repetition of similar recommendations. This condition is in line with the concept of algorithmic culture put forward by [28], where computational systems play an active role in determining cultural circulation and shaping public tastes. In the context of Netflix Indonesia, the visibility of certain content ends up being the result of an iterative and automated algorithmic mediation process.

In addition, the content growth pattern shown in Figure 1 also shows that Netflix is not simply increasing the number of impressions, but is building a data-driven entertainment ecosystem that is oriented towards user attention retention. As the amount of content increases exponentially, algorithms become the primary mechanism that helps audiences navigate a huge catalog. However, this process also creates the so-called [25], [74] as a filter bubble, which is a condition when users are constantly directed to a type of content similar to their previous preferences. As a result, audiences don't really find content randomly, but rather are directed through consumption paths that have been curated by the platform's predictive system. In the long term, these conditions have the potential to narrow the diversity of cultural exposure and reinforce the homogenization of digital media preferences [24], [49].

Furthermore, Netflix's increase in content in Indonesia post-2016 shows how the global platform is beginning to integrate the local market into the logic of transnational distribution. The presence of Indonesian content in the Netflix catalog does open up new opportunities for visibility for the local creative industry, but at the same time the content still has to adapt to the global algorithmic logic based on user engagement and retention. Thus, Netflix's expansion into Indonesia is not only a transformation of media distribution technology, but also a transformation of consumer culture that increasingly relies on automated recommendation systems [33], [57]. This shows that the viewing preferences of modern audiences are increasingly shaped by the complex interplay between user behavior data, platform strategy, and the algorithmic forces at work behind the scenes of OTT systems.

3.2 Gender Dominance and Recommendation Patterns

One of the most prominent findings of the results *Exploratory Data Analysis* (EDA) in this study is related to the concentration of genres in the Netflix catalog in Indonesia. The analysis shows that only a small number of genres dominate content distribution and platform recommendation

patterns, particularly International Movies, dramas, romantic movies, comedies, and horror movies. The dominance of these genres shows that Netflix's algorithm tends to prioritize content with high emotional appeal and a high level of user engagement. In the context of digital culture, genres no longer function simply as a category of content classification, but have become an algorithmic instrument for directing audience consumption patterns based on the user's behavioral history and emotional preferences [17], [28]. These findings show how OTT algorithms build cultural visibility structures through strengthening certain genres that are considered most effective in retaining audience attention.

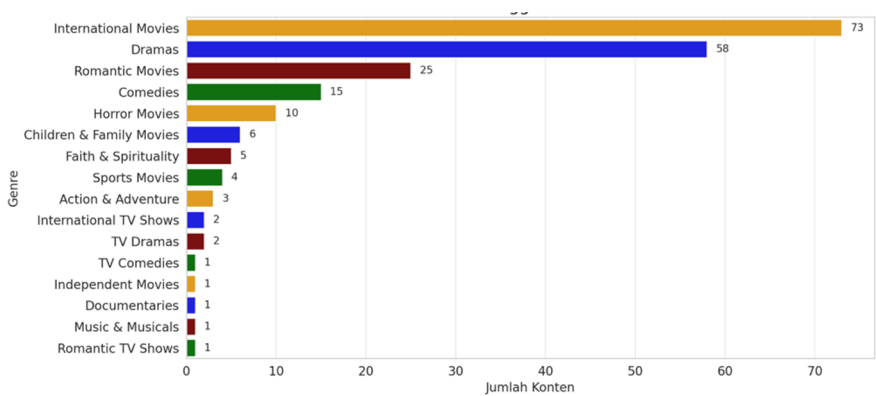


Figure 2. Top Genres on Netflix Indonesia

The visualization in Figure 2 shows that International Movies is the most dominant category with the number of contents reaching 73 titles, followed by the drama genre with 58 content and romantic movies with 25 contents. After the three main categories, there was a sharp decline in distribution in other genres such as comedy, horror, documentary, and TV dramas. This pattern indicates a long-tail distribution structure, where a diversity of genres is indeed available in the Netflix catalog, but the level of visibility and exposure remains concentrated in a specific genre. From the perspective of platform studies, this condition reflects the practice of algorithmic reinforcement, which is a mechanism by which recommendation systems reinforce an already popular genre to minimize the risk of recommendation failure and increase the probability of user engagement [18], [20], [49]. In other words, the algorithm not only displays the audience's preferences, but also actively shapes and normalizes those preferences through the repetition of exposure to the same genre.

The dominance of drama and romance genres in the dataset also shows that Netflix Indonesia relies heavily on emotion-based narratives as an audience retention strategy. These genres generally have characteristics of interpersonal conflict, emotional relationships, and cliffhanger patterns that drive binge-watching behaviors [16], [37]. In the attention economy, content with high emotional intensity has a greater chance of retaining users for a longer duration of consumption [75]. Therefore, Netflix's algorithm tends to prioritize genres that are capable of generating repetitive emotional engagement. This condition shows that the distribution logic of OTT platforms is not only based on cultural diversity, but is also greatly influenced by the efficiency of user attention retention in a data-driven entertainment ecosystem.

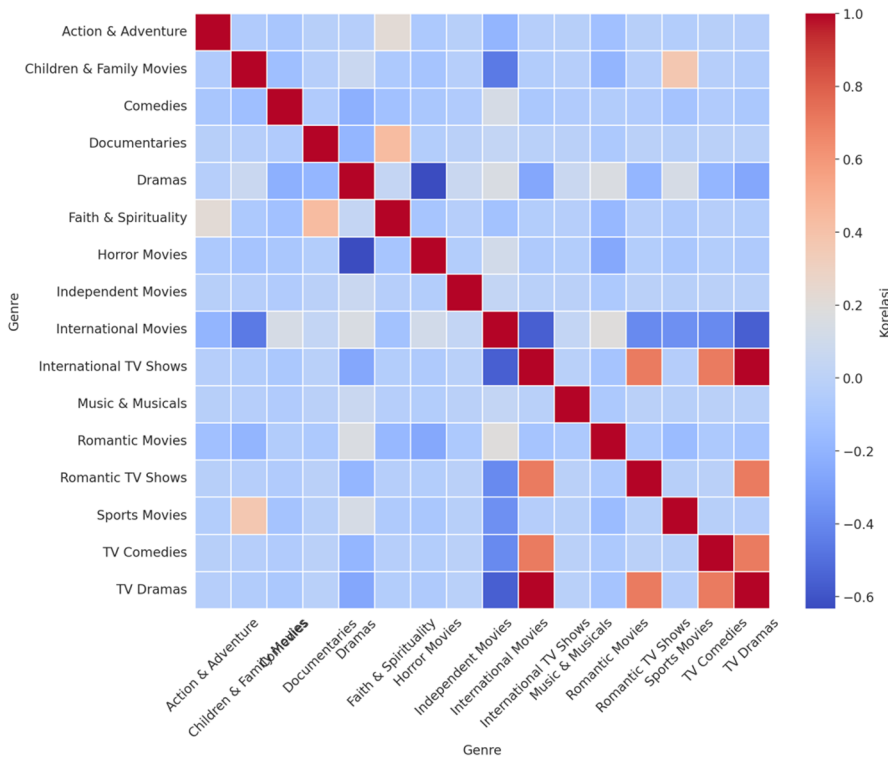


Figure 3. Correlation Between Netflix Genres in Indonesia

In addition to genre distribution, the analysis of correlations between genres through the heatmap in Figure 3 shows that there is a fairly strong relationship between certain genres, especially in the categories of International TV Shows, TV Dramas, Romantic TV Shows, and TV Comedies. This positive correlation indicates that Netflix's

recommendation system groups genres based on users' affective patterns and emotional experiences, rather than solely the diversity of themes. In contrast, some genres such as Horror Movies and Dramas show quite strong negative correlations, signifying that algorithms tend to separate emotional experiences that are considered incompatible in a single recommendation path. These findings support the argument that OTT algorithms work through the process of affective categorization, which is the grouping of content based on the audience's emotional response to increase the probability of sustainable consumption [19], [24].

From the perspective of communication studies, this condition has significant cultural implications. Genres in OTT platforms are no longer just a classification device, but serve as a cultural language that shapes audiences' expectations and experiences of digital media. As algorithms constantly reinforce similar genres, audiences are slowly directed to homogeneous consumption patterns. As a result, the space for cultural exploration and narrative diversity is becoming increasingly limited as users are more often exposed to content that is algorithmically "safe" and proven to be effective in generating high engagement [18], [25]. In the long run, this condition has the potential to create a homogenization of digital cultural tastes, where audience preferences are formed through the predictive logic of platforms rather than users' organic exploration of diverse genres and alternative forms of storytelling.

In addition to showing the dominance of certain genres, the temporal trend visualization in Figure 6 also shows that the popularity of genres on Netflix Indonesia has changed quite dynamically from time to time. At the beginning of the observation period, the distribution of genres was still relatively low and dispersed, but since 2015 there has been a significant increase in the genres of International Movies, dramas, and romantic movies. The sharpest surge occurred in the 2017–2020 period, when the International Movies genre reached the highest distribution peak compared to other genres. These findings show that Netflix's algorithm is gradually directing Indonesian audiences towards global content consumption with a popularity-driven recommendation system approach. From a platformization perspective, this condition shows how OTT platforms not only distribute entertainment, but also build transnational cultural flows through algorithmic logic that amplifies genres with high engagement performance [10], [30]. In other words, the increase in certain genres does not fully reflect the organic preferences of the audience, but rather the result of the interaction between user behavior and the platform's data-driven recommendation strategy.

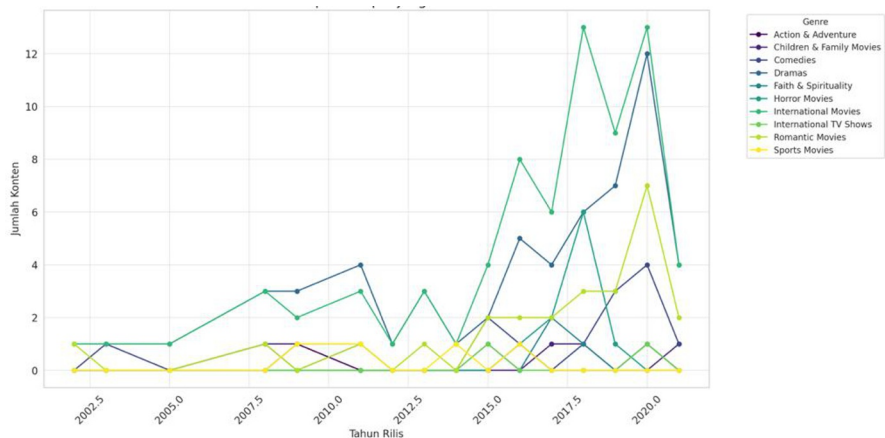


Figure 4. Changes in Popular Genre Trends Over Time on Netflix Indonesia

The visualization of Figure 4 also shows that several genres such as Horror Movies, Romantic Movies, and dramas experience quite sharp fluctuations in certain periods. This pattern shows that Netflix's recommendation system is highly adaptive to audience consumption trends and digital entertainment market dynamics. The horror genre, for example, experienced a significant increase ahead of 2018–2020, which can be attributed to the increasing popularity of emotional tension-based content and psychological thrills in the global streaming culture. Meanwhile, the drama and romance genres remain consistently dominant because they have a high ability to build long-term emotional attachment through relational narratives and interpersonal conflicts [14], [37]. From the perspective of cultural communication, this condition suggests that OTT algorithms work not only as a technological distribution system, but also as a cultural curation mechanism that determines what form of narrative continues to be maintained in the digital consumption space. As a result, audience preferences are evolving following the algorithmic rhythm of platforms that constantly optimize genres based on the user's potential retention of attention and emotional engagement [18], [28].

3.3 Content Rating Distribution and Algorithmic Targeting

Another important finding in this study is related to the distribution of content rating categories in the Netflix catalog in Indonesia. Based on the results of Exploratory Data Analysis (EDA), it can be seen that there

is a very strong dominance of the TV-14, TV-PG, and TV-MA classifications compared to other rating categories. This dominance shows that Netflix Indonesia's content distribution structure is not designed to serve all age groups in a balanced manner, but is more oriented towards adolescents and young adults who have a high level of digital media consumption. In a data-driven OTT ecosystem, content ratings not only serve as an age classification guide, but also become a strategic instrument in building audience segmentation and maximizing user engagement [20], [33]. Thus, rating categories can be understood as part of algorithmic communication logic that helps platforms determine which content is most effective for retaining audience attention in the long run.

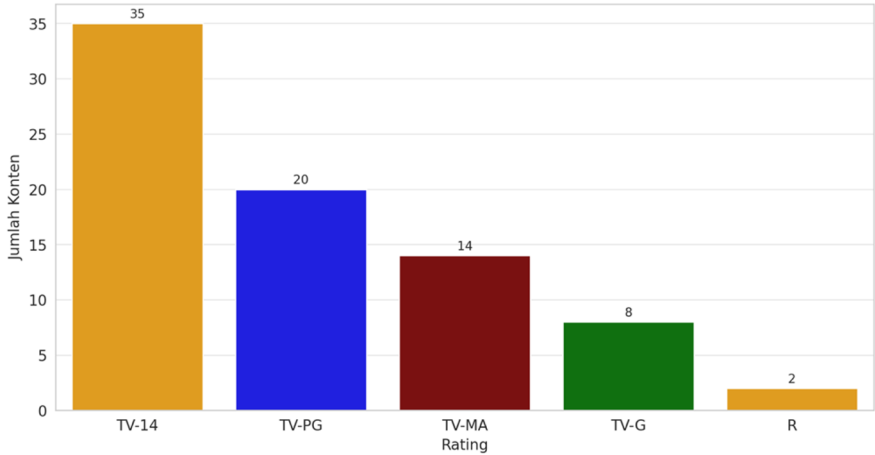


Figure 5. Distribution of Netflix Content Ratings in Indonesia

The visualization in Figure 5 shows that the TV-14 category dominates the Netflix Indonesia catalog with a total of 35 contents, followed by TV-PG with 20 content and TV-MA with 14 contents. Meanwhile, more family-friendly categories such as TV-G only appear in limited numbers, and the R category has the least representation. These findings show that Netflix's algorithm promotes more content that is on the teenage to young adult age spectrum than family or children's content. From the perspective of the attention economy, this age group is a very strategic market segment because it has a high consumption intensity, binge-watching tendencies, and greater platform loyalty than other age groups [37], [75]. Therefore, the distribution of ratings in the Netflix catalog is not a random phenomenon, but part of a data-driven retention

strategy that aims to maintain the duration of user consumption for as long as possible.

In addition to showing the audience segmentation strategy, this rating distribution also indicates how the algorithm works through affective clustering. Content rated TV-14 and TV-MA generally deals with themes of emotional relationships, interpersonal conflict, mild violence, romance, and more complex social dynamics. These themes have the capacity to create high emotional engagement so that they are easier to maintain in an algorithmic recommendation system [17], [28]. In this context, ratings are not just a censorship or regulatory category, but also an algorithmic signal that helps platforms predict users' consumption patterns and emotional preferences. This reinforces the view that Netflix's personalization system works as a market-oriented communication system, not just a neutral filter that displays content objectively.

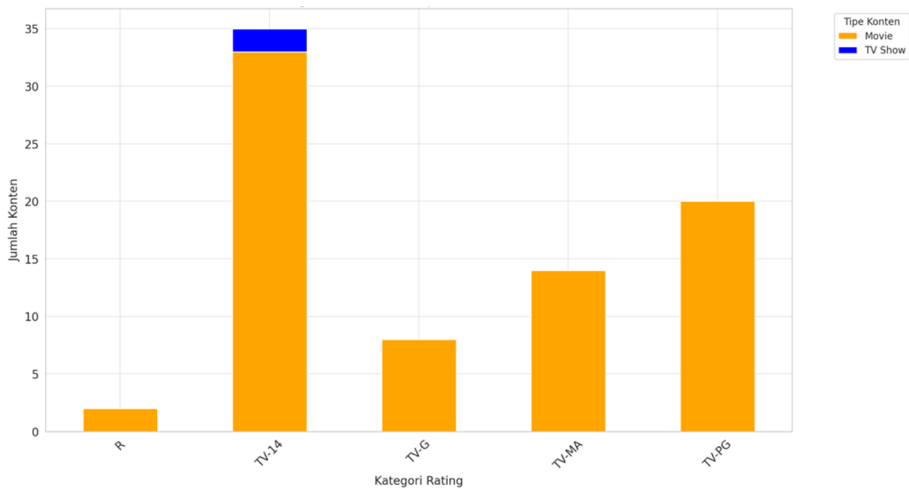


Figure 6. Distribution of Ratings Based on Content Type in Netflix Indonesia

Figure 6 shows the distribution of ratings by content type between movies and TV shows on Netflix Indonesia. Visualization shows that almost all rating categories are dominated by movie formats, while TV shows appear in very small numbers, especially in the TV-14 category. These findings are interesting because they show that Netflix Indonesia is still heavily reliant on film distribution to build a variety of its local catalog. However, the dominance of films with TV-14 and TV-PG classifications shows that the platform still maintains an orientation on narratives that are emotionally consumable and have broad appeal to young audiences. In the context of OTT, content like this is considered

more algorithmically "safe" because it has a greater chance of being re-recommended to a group of users with similar preference patterns [24], [49].

From a digital media communication perspective, this rating distribution shows that Netflix is not only building a catalog based on content diversity, but also on the potential for emotional engagement and user retention efficiency. Algorithmic systems work by mapping the relationship between age ratings, content types, and user consumption behaviors to generate the most commercially effective recommendations. As a result, audiences are slowly being directed towards increasingly homogeneous consumption patterns, especially towards content with high emotional intensity and serial narrative structures that support the practice of continuous viewing [10], [14]. In the long run, this condition shows how OTT algorithms function as cultural infrastructure that not only organizes media distribution, but also shapes patterns of expectations, preferences, and viewing experiences of modern audiences.

3.4 Repetition, Popularity, and Local Content Visibility

The results of the Exploratory Data Analysis (EDA) also show that there is a fairly strong repetition pattern in the description of local Indonesian content on Netflix. The repetition is seen in themes, social relations, and narrative motifs that continue to appear in various content titles. In the context of algorithm-based OTT platforms, repetition is not just a creative phenomenon, but is part of the data-driven distribution logic. Algorithms tend to reinforce content that has a high pattern of engagement with previous users, so certain themes will be recommended more often than narrative forms that are considered less algorithmically "safe" [17], [28]. Thus, the popularity of local content on Netflix is determined not only by cultural factors, but also by the ability of the theme to adapt to the digital platform's global recommendation mechanism.

removing the identity of local culture, but repackaging it to fit broader global consumption preferences.

From the perspective of digital media communication, this repetition pattern shows how the OTT algorithm functions as a cultural curation mechanism. The recommendation system doesn't just select content based on artistic quality, but based on the probability of the content's success in retaining the user's attention. As a result, themes that have been proven to be emotionally successful will continue to be reinforced through repeated recommendations, while alternative themes that are more experimental have a smaller chance of visibility [24], [49]. In the long term, this condition has the potential to create a standardization of digital cultural narratives, where the diversity of content remains quantitatively visible, but structurally directed towards a homogeneous story pattern that can be predicted by algorithms.

These findings support the academic view that global platforms work not only as media distributors, but also as cultural institutions that have the power to determine the forms of cultural representation that are most "worthy" to be presented to the global public [33], [57]. In the context of Netflix Indonesia, the visibility of local content is finally the result of negotiations between national cultural identity and the economic logic of data-driven platforms. Therefore, the presence of Indonesian content in the Netflix catalog does open up international exposure space, but at the same time it also shows how local culture is increasingly adapted to algorithm-based global market recommendation mechanisms and preferences.

3.5 Audience Engagement and Retention Logic

One of the important findings in this study relates to the distribution of content types between movies and television series in the Netflix catalog in Indonesia. In contrast to the general assumption about the dominance of television series in streaming culture, the results of Exploratory Data Analysis (EDA) actually show that the Netflix Indonesia catalog is more dominated by film formats than TV shows. These findings indicate that Netflix's content distribution strategy in the Indonesian market still relies heavily on film formats as the main medium to reach local audiences. Nevertheless, the dominance of such films does not mean that the platform abandons the logic of user retention. Instead, the distribution of fixed content types shows how OTT algorithms work to retain audience attention through a combination of consumption duration, recommendation patterns, and user emotional experience [14], [37]. In the

context of digital platforms, both movies and television series are positioned as retention instruments that are optimized based on user consumption behavior and engagement efficiency.

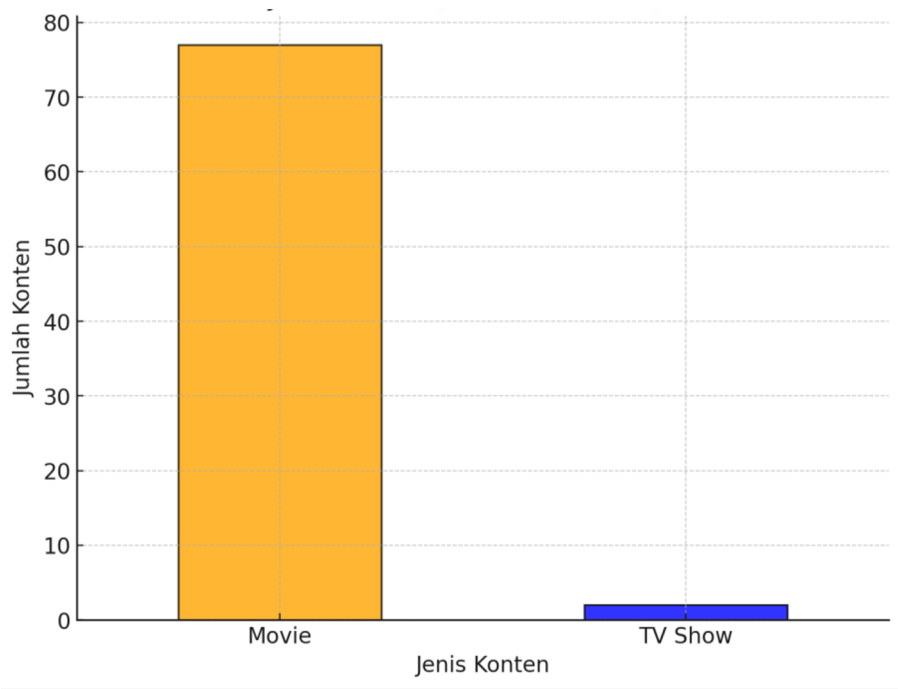


Figure 8. Distribution of Netflix Content Types (Movies vs TV Shows)

The visualization in Figure 8 shows a huge distribution imbalance between movie and TV show formats. The dataset shows that film content reaches around 77 titles, while TV shows only amount to about 2 titles in the Indonesian content sample analyzed. The dominance of this film format shows that Netflix Indonesia still relies on a quick-consumption entertainment model that allows audiences to complete the viewing experience in one session. However, from an algorithmic perspective, the movie format can still be optimized for user retention through a sequential recommendation system, where after completing one movie, users are immediately directed to another movie with a similar genre, emotional atmosphere, or theme [17], [28]. Thus, attention retention is not only built through narrative serialization, but also through the continuum of emotional recommendations between contents.

The dominance of films in the Indonesian catalog also shows that there is an adjustment of the platform's strategy to the characteristics of the

local market. In the context of developing countries such as Indonesia, digital media consumption is still influenced by the factors of time flexibility, user mobility, and entertainment preferences that can be consumed instantly through mobile devices [10], [34]. Therefore, the film format is becoming more compatible with people's media consumption patterns that tend to prioritize quick access and entertainment experiences that do not require long-term commitments such as television series. Nevertheless, even though the film format is more dominant, the platform's logic remains oriented towards attention retention. Netflix's algorithm works by connecting one movie to another through genre patterns, ratings, and emotional preferences, creating a continuous viewing cycle in the OTT ecosystem.

From an attention economy perspective, the duration of user engagement remains a key metric in the business model of digital platforms [75]. Therefore, Netflix's algorithmic system can be understood as a communication architecture designed to retain the audience's attention for as long as possible, both through television series and interconnected movie recommendations. This condition shows that user retention in OTT is not only built through the length of the duration of a single content, but also through the platform's ability to create a continuous consumption experience. In the long run, audiences are slowly adapting to the rhythms of consumption shaped by the platform's algorithms, including repetitive viewing habits, targeted genre exploration, and emotional attachment to certain recommendation patterns [18], [28]. Thus, Netflix's algorithm not only organizes the distribution of digital entertainment, but also shapes the consumption habits and cultural rhythms of modern society's media

3.6 Cultural Implications of Algorithmic Curation

The results of this study show that the cumulative effects of algorithmic personalization, genre reinforcement, and user retention logic produce much broader cultural consequences than simply changes in media consumption patterns. In the Netflix ecosystem, algorithms are not only in charge of recommending content, but also play an active role in determining which narratives gain high visibility and continue to circulate in the digital cultural space. When certain genres such as drama, romance, and emotional narratives are consistently amplified through recommendation systems, algorithms indirectly participate in shaping the audience's cultural meaning-making and cultural orientation patterns [17], [28]. In other words, the algorithmic curation process has shifted the

position of OTT platforms from mere entertainment providers to cultural actors who have the power to determine the direction of symbolic consumption of digital society.

In this context, OTT platforms can be understood as a new cultural institution that operates through data logic and predictions of user behavior. Netflix's recommendation system not only affects what audiences watch, but also how audiences understand social relationships, identity, conflict, romance, family, and even the concept of success in modern life. Narratives that are constantly reproduced through algorithmic recommendations slowly build certain emotional standards and cultural expectations of social reality [33], [57]. In these conditions, algorithms work as a form of symbolic digital power that determines which cultural representations are considered relevant, interesting, and worthy of continued consumption by the global public.

This phenomenon is in line with the concept of algorithmic culture put forward by [28], where computational systems no longer simply support cultural activities, but actively participate in the production of cultural norms and practices of society. In the Indonesian context, this condition presents a more complex problem related to cultural sovereignty. Although Netflix provides space for local Indonesian content to appear in the global catalog, the visibility of such content must still follow the platform's algorithmic logic based on emotional engagement and market efficiency. As a result, local cultures have the potential to be standardized to match the global preferences that have been shaped by transnational recommendation systems [10], [32], [36]. Thus, cultural diversity is still visually present, but its narrative structure and form of representation are increasingly directed towards patterns that are compatible with the logic of global platforms.

In addition, the dominance of algorithms in determining cultural exposure also shows how the power of digital media is increasingly invisible (invisible infrastructure power). Audiences still have agency in choosing the content they want to consume, but those choices are constantly directed through a recommendation system that works behind the scenes of the platform. The algorithm learns the user's behavior history, builds a preference profile, and then directs the user to the type of content that is considered most appropriate for previous consumption patterns [19], [24]. In these conditions, audience preferences are no longer formed entirely organically, but rather through a process of negotiation between human desires and machine predictions. As a result, the line between

"personal choice" and "algorithmic recommendation outcomes" is becoming increasingly blurred in contemporary digital media culture.

From the perspective of digital media communication, this condition suggests that OTT algorithms have become an important part of the production process of modern social reality. Netflix and other streaming platforms not only regulate entertainment distribution, but also shape cultural rhythms, patterns of emotional expectations, and the way people perceive the social world through data-mediated media consumption. Therefore, studies on OTT are no longer enough to simply discuss distribution technology or the platform economy, but must also look at how recommendation systems function as a mechanism of cultural production and symbolic power in a digital society [76] [18], [57]. In the long term, understanding the cultural implications of algorithmic curation is becoming increasingly important as OTT platforms continue to evolve as the dominant infrastructure in global and local media life.

4 CONCLUSION

This research shows that the algorithmic recommendation system at Netflix Indonesia plays a significant role in shaping content visibility, genre preferences, and audience consumption patterns in the data-driven digital media ecosystem. Through the Exploratory Data Analysis (EDA) approach, the study found that content distribution on Netflix does not take place neutrally, but is influenced by algorithmic logic that prioritizes genres with high emotional engagement such as dramas, romantic movies, and international movies. The dominance of the genre shows how OTT algorithms work as a cultural curation mechanism that reinforces certain consumption patterns to increase user attention retention and engagement efficiency in digital streaming platforms

The study also found that Netflix's recommendation system tends to lead audiences to homogeneous consumption patterns through the reinforcement of popular genres, classification of certain ratings, and the repetition of emotional themes in local Indonesian content. The distribution of ratings dominated by the TV-14, TV-PG, and TV-MA categories shows that Netflix Indonesia is more oriented towards the adolescent and young adult segments that have a high level of digital media consumption. In addition, word cloud and descriptive analysis showed that local Indonesian content on Netflix featured more universal themes such as love, family, friendship, and life struggles, which were packaged to fit the logic of the global market and the algorithms of transnational platforms.

The research findings reinforce the concepts of algorithmic culture and algorithmic gatekeeping by showing that algorithms not only reflect user preferences, but also actively shape the patterns of cultural exposure, emotional experience, and media consumption rhythms of modern audiences. In the Indonesian context, this

condition presents problems regarding cultural homogenization, standardization of local narratives, and the increasing symbolic power of global platforms over national digital cultural distribution. Thus, OTT platforms like Netflix no longer function simply as entertainment distributors, but have evolved into data-driven cultural institutions that have a profound influence in shaping the norms, tastes, and cultural experiences of contemporary digital society.

Methodologically, the study also shows that the EDA approach can be used effectively in the study of digital communication to uncover hidden patterns in algorithm-based platforms. The integration between computational analysis and critical communication interpretation makes an important contribution to the development of platform studies, digital media, and algorithmic culture in the context of the Global South, especially Indonesia. The next research is suggested to expand the analysis by using direct user behavior data, machine learning analytics, and cross-platform OTT comparisons so that the understanding of the influence of algorithms on digital culture can be studied more comprehensively.

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References

- [1] A. Abdullah and M. Mustafa, *Digital Broadcasting: Regulasi dan Kontroversi Transisi Analog ke TV Digital di Indonesia*. Depok: Rajawali Pers, 2021.
- [2] A. Abdullah, M. Mustafa, and T. Mutia, *TVRI & DIGITAL BROADCASTING: Analog Switch Off (ASO) Lembaga Penyiaran Publik*. Depok: Rajawali Pers, 2023. [Online]. Available: <https://www.rajagrafindo.co.id/produk/tvri-dan-digital-broadcasting-analog-switch-off-aso-lembaga-penyiaran-publik-assyari-abdullah-s-sos-m-i-kom-mustafa-s-sos-m-i-kom-tika-mutia-m-i-kom/>
- [3] A. Abdullah, "Jalan Terjal Penyiaran Digital," *Harian pagi Riau Pos*, 2021.
- [4] A. Budiman, "Model Pengelolaan Digitalisasi Penyiaran di Indonesia," *Jurnal Politica*, vol. 6, no. 2, p. 16, 2015.
- [5] A. Abdullah, "Menakar Kebermanfaatan Siaran Digital," *Harian pagi Riau Pos*, 2021.
- [6] D. Mairita, M. T. M. Tazri, and S. Sumayah, "Pola Kebijakan KPID Wilayah Riau dalam Mengawasi Digitalisasi Penyiaran," *SLJIL*, vol. 3, no. 7, pp. 1565–1575, Jul. 2021, doi: 10.46799/syntax-idea.v3i7.1305.
- [7] A. Abdullah, "Pola Kebijakan Digitalisasi Penyiaran di Indonesia," *ARISTO*, vol. 8, no. 1, p. 76, Jan. 2020, doi: 10.24269/ars.v8i1.2263.
- [8] A. Abdullah *et al.*, "Navigating Society 5.0: Unraveling the Dynamics of a People-Centric Super-Smart Society," *ARISTO*, vol. 12, no. 2, May 2024, doi: 10.24269/ars.v12i2.9038.
- [9] G. Dagnino, "Regulation and co-regulation of product placement for OTT SVODs: The case of Netflix," *International Journal of Digital Television*, vol. 9, no. 3, pp. 203–218, Sep. 2018, doi: 10.1386/jdtdv.9.3.203_1.

- [10] R. Lobato, *Netflix nations: the geography of digital distribution*. in Critical cultural communication. New York: New York University Press, 2019.
- [11] A. D. Lotz, *The television will be revolutionized*. New York: New York University Press, 2007.
- [12] J. Van Dijck, "Datafication, dataism and dataveillance: Big Data between scientific paradigm and ideology," *SS*, vol. 12, no. 2, pp. 197–208, May 2014, doi: 10.24908/ss.v12i2.4776.
- [13] M. L. Wayne, "Netflix, Amazon, and branded television content in subscription video on-demand portals," *Media, Culture & Society*, vol. 40, no. 5, pp. 725–741, Jul. 2018, doi: 10.1177/0163443717736118.
- [14] A. Lotz, *Portals: A Treatise on Internet-Distributed Television*. Ann Arbor, MI: Maize Books, 2017. doi: 10.3998/mpub.9699689.
- [15] A. D. Lotz, "On 'Television Criticism': The Pursuit of the Critical Examination of a Popular Art," *Popular Communication*, vol. 6, no. 1, pp. 20–36, Jan. 2008, doi: 10.1080/15405700701746509.
- [16] A. D. Lotz, "Evolution or revolution? Television in transformation," *Critical Studies in Television: The International Journal of Television Studies*, vol. 13, no. 4, pp. 491–494, Dec. 2018, doi: 10.1177/1749602018796757.
- [17] B. Hallinan and T. Striplas, "Recommended for you: The Netflix Prize and the production of algorithmic culture," *New Media & Society*, vol. 18, no. 1, pp. 117–137, Jan. 2016, doi: 10.1177/1461444814538646.
- [18] D. Beer, "The social power of algorithms," *Information, Communication & Society*, vol. 20, no. 1, pp. 1–13, Jan. 2017, doi: 10.1080/1369118X.2016.1216147.
- [19] T. Gillespie, "The Relevance of Algorithms," in *Media Technologies*, T. Gillespie, P. J. Boczkowski, and K. A. Foot, Eds., The MIT Press, 2014, pp. 167–194. doi: 10.7551/mitpress/9780262525374.003.0009.
- [20] P. M. Napoli, "Automated Media: An Institutional Theory Perspective on Algorithmic Media Production and Consumption: Automated Media," *Commun Theor*, vol. 24, no. 3, pp. 340–360, Aug. 2014, doi: 10.1111/comt.12039.
- [21] M. Ananny and K. Crawford, "Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability," *New Media & Society*, vol. 20, no. 3, pp. 973–989, Mar. 2018, doi: 10.1177/1461444816676645.
- [22] K. N. Dorr, "Mapping the field of Algorithmic Journalism," *Digital Journalism*, vol. 4, no. 6, pp. 700–722, Aug. 2016, doi: 10.1080/21670811.2015.1096748.
- [23] R. Gorwa, R. Binns, and C. Katzenbach, "Algorithmic content moderation: Technical and political challenges in the automation of platform governance," *Big Data & Society*, vol. 7, no. 1, p. 205395171989794, Jan. 2020, doi: 10.1177/2053951719897945.
- [24] T. Bucher, *If...Then: Algorithmic Power and Politics*, 1st ed. Oxford University Press New York, 2018. doi: 10.1093/oso/9780190493028.001.0001.
- [25] E. Pariser, "The Filter Bubble: How the New Personalized Web Is Changing What We Read and How We Think.," *Penguin Press.*, 2011.
- [26] E. Pariser, *The filter bubble: what the Internet is hiding from you*. New York: Penguin Press, 2011.

- [27] J. Burrell, "How the machine 'thinks': Understanding opacity in machine learning algorithms," *Big Data & Society*, vol. 3, no. 1, p. 2053951715622512, Jun. 2016, doi: 10.1177/2053951715622512.
- [28] T. Striphas, "Algorithmic culture," *European Journal of Cultural Studies*, vol. 18, no. 4–5, pp. 395–412, Aug. 2015, doi: 10.1177/1367549415577392.
- [29] N. Couldry and U. A. Mejias, *The costs of connection: how data is colonizing human life and appropriating it for capitalism*. in Culture and economic life. Stanford, California: Stanford University Press, 2019.
- [30] D. B. Nieborg and T. Poell, "The platformization of cultural production: Theorizing the contingent cultural commodity," *New Media & Society*, vol. 20, no. 11, pp. 4275–4292, Nov. 2018, doi: 10.1177/1461444818769694.
- [31] S. Zuboff, *The age of surveillance capitalism: the fight for a human future at the new frontier of power*, First edition. New York: PublicAffairs, 2019.
- [32] S. Cunningham, D. Craig, and N. K. Baym, Eds., *Creator culture: an introduction to global social media entertainment*. New York: New York University Press, 2021.
- [33] J. Van Dijck, T. Poell, and M. De Waal, *The Platform Society*, 1st ed. Oxford University Press New York, 2018. doi: 10.1093/oso/9780190889760.001.0001.
- [34] A. Athique, *Digital media and society: an introduction*. Cambridge, England ; Malden, Massachusetts: Polity Press, 2013.
- [35] T. Flew, *Regulating platforms*. Cambridge: Polity Press, 2021.
- [36] T. Flew and S. Cunningham, "Creative Industries after the First Decade of Debate," *The Information Society*, vol. 26, no. 2, pp. 113–123, Feb. 2010, doi: 10.1080/01972240903562753.
- [37] M. Jenner, *Netflix and the Re-invention of Television*, 1st ed. 2018. Cham: Springer International Publishing : Imprint: Palgrave Macmillan, 2018. doi: 10.1007/978-3-319-94316-9.
- [38] A. D. Lotz, "Seventeen Days in July at Hollywood and Highland: Examining the Television Critics Association Tour," *Journal of Popular Film and Television*, vol. 33, no. 1, pp. 22–28, Apr. 2005, doi: 10.1080/01956051.2005.10662061.
- [39] A. D. Lotz and S. M. Ross, "Bridging media-specific approaches: The value of feminist television criticism's synthetic approach," *Feminist Media Studies*, vol. 4, no. 2, pp. 185–202, Jul. 2004, doi: 10.1080/1468077042000251247.
- [40] J. Burgess and J. Green, *Youtube: online video and participatory culture*, Second edition. in Digital media and society. Cambridge, UK ; Medford, MA: Polity Press, 2018.
- [41] A. Abdullah *et al.*, "When Newsroom Tears Go Viral: A Sentiment Analysis of Public Response to Media Layoffs in Indonesia," *JCC*, vol. 4, no. 1, pp. 692–710, Jun. 2026.
- [42] P. Ballon, "Old and New Issues in Media Economics," in *The Palgrave Handbook of European Media Policy*, K. Donders, C. Pauwels, and J. Loisen, Eds., London: Palgrave Macmillan UK, 2014, pp. 70–95. doi: 10.1057/9781137032195_5.
- [43] G. Turner, "Approaching the cultures of use: Netflix, disruption and the audience," *Critical Studies in Television: The International Journal of Television Studies*, vol. 14, no. 2, pp. 222–232, Jun. 2019, doi: 10.1177/1749602019834554.

- [44] K. Van Es, "Netflix & Big Data: The Strategic Ambivalence of an Entertainment Company," *Television & New Media*, vol. 24, no. 6, pp. 656–672, Sep. 2023, doi: 10.1177/15274764221125745.
- [45] S. Sumaiyah *et al.*, "Building Hope in Crisis: Global Public Service Broadcaster Innovation During the Covid-19 Pandemic," *ARISTO*, vol. 13, no. 1, pp. 128–154, 2025, doi: 10.24269/ars.v13i1.9004.
- [46] P. A. C. A. Andal-Ancion and G. S. Yip, "The Digital Transformation of Traditional Businesses," *MIT Sloan Management Review*, vol. ol. 44, no. 4, 2003.
- [47] D. R. Winseck and D. Y. Jin, Eds., *The political economies of media: the transformation of the global media industries*. London: Bloomsbury Academic, 2011.
- [48] J. Jayus, A. Abdullah, M. Mustafa, and S. Sumaiyah, "YouTube, Public Discourse, and the 'Makan Siang Gratis' Program: An Analysis of Toxicity Comments on the Liputan6 Channel," *Proceeding Jogjakarta Communication Conference*, vol. 3, no. 1, 2025, [Online]. Available: <https://jcc-indonesia.id/proceeding/index.php/jcc/article/view/383>
- [49] D. Beer, *The Tensions of Algorithmic Thinking: Automation, Intelligence and the Politics of Knowing*, 1st ed. Policy Press, 2022. doi: 10.1332/policypress/9781529212891.001.0001.
- [50] A. Abdullah *et al.*, "From Query to Communication: A Data-Driven Study of Indonesians Google Search Behavior," *ICOMMEDIG*, vol. 2, no. 1, pp. 840–857, Dec. 2025.
- [51] A. Abdullah *et al.*, "Google Trends and Indonesia Presidential Elections 2024: Predictor of Popularity Candidate in Digital Age," *POLITICON: j. ilmu politik*, vol. 6, no. 2, pp. 273–300, Aug. 2024, doi: 10.15575/politicon.v6i2.34636.
- [52] S. Seker, T. C. Akinci, and A. Ozturk, "Plato's Philosophy and Cloud Computing System with a Cognitive Approach," *AIA*, vol. 3, no. 2, pp. 139–144, Aug. 2023, doi: 10.47852/bonviewAIA32021298.
- [53] J. W. Tukey, *Exploratory data analysis*. in Addison-Wesley series in behavioral science. Reading, Mass: Addison-Wesley Pub. Co, 1977.
- [54] J. T. Vanderplas, *Python data science handbook: essential tools for working with data*, First edition. Sebastopol, CA: O'Reilly Media, Inc, 2016.
- [55] D. Y. Jin, "Global Political Economy, Platforms, and Media Industries," in *Oxford Research Encyclopedia of Communication*, 1st ed., M. Powers, Ed., Oxford University Press New York, NY, 2024. doi: 10.1093/acrefore/9780190228613.013.1530.
- [56] L. Papadopoulou, "Political economy of media," in *Elgar Encyclopedia of Political Communication*, A. Nai, M. Grömping, and D. Wirz, Eds., Edward Elgar Publishing, 2025, pp. 230–233. doi: 10.4337/9781035301447.vol3.00059.
- [57] N. Couldry and U. A. Mejias, "The Costs of Connection: How Data Are Colonizing Human Life and Appropriating It for Capitalism," *Social Forces*, vol. 99, no. 1, pp. e6–e6, Aug. 2020, doi: 10.1093/sf/soz172.
- [58] T. Wu, *The attention merchants: the epic scramble to get inside our heads*, First edition. New York: Alfred A. Knopf, 2017.

- [59] P. A. C. A. Andal-Ancion and G. S. Yip, “The 1111111111 Digital Transformation of Traditional Businesses,” *MIT Sloan Management Review*, vol. 44, no. 4, 2003.
- [60] R. D. D. and S. M. T. A., “Enhancing Big Data Classification Accuracy Through Deep Learning Techniques,” *AIA*, May 2025, doi: 10.47852/bonviewAIA52023432.
- [61] Mustakim, M. Z. Fauzi, Mustafa, A. Abdullah, and Rohayati, “Clustering of Public Opinion on Natural Disasters in Indonesia Using DBSCAN and K-Medoids Algorithms,” *J. Phys.: Conf. Ser.*, vol. 1783, no. 1, p. 012016, Feb. 2021, doi: 10.1088/1742-6596/1783/1/012016.
- [62] R. Kitchin, *The data revolution: big data, open data, data infrastructures & their consequences*. Los Angeles London New Dehli: Sage, 2014.
- [63] V. Mayer-Schönberger and K. Cukier, *Big data: a revolution that will transform how we live, work, and think*. Boston: Houghton Mifflin Harcourt, 2013.
- [64] B. Abu-Salih, P. Wongthongtham, D. Zhu, K. Y. Chan, and A. Rudra, “Social Big Data: An Overview and Applications,” in *Social Big Data Analytics*, Singapore: Springer Singapore, 2021, pp. 1–14. doi: 10.1007/978-981-33-6652-7_1.
- [65] A. D. Lotz, “Teasing apart television industry disruption: consequences of meso-level financing practices before and after the US multiplatform era,” *Media, Culture & Society*, vol. 41, no. 7, pp. 923–938, Oct. 2019, doi: 10.1177/0163443719863354.
- [66] S. Bansal, “Netflix Movies and TV Shows.” Kaggle, 2021. [Online]. Available: <https://www.kaggle.com/datasets/shivamb/netflix-shows>
- [67] S.-H. Chen and T. Yu, “Big Data in Computational Social Sciences and Humanities: An Introduction,” in *Big Data in Computational Social Science and Humanities*, S.-H. Chen, Ed., in Computational Social Sciences. , Cham: Springer International Publishing, 2018, pp. 1–25. doi: 10.1007/978-3-319-95465-3_1.
- [68] H. Lippell, “Big Data in the Media and Entertainment Sectors,” in *New Horizons for a Data-Driven Economy*, J. M. Cavanillas, E. Curry, and W. Wahlster, Eds., Cham: Springer International Publishing, 2016, pp. 245–259. doi: 10.1007/978-3-319-21569-3_14.
- [69] W. van Atteveldt, D. Margolin, C. Shen, D. Trilling, and R. Weber, “A Roadmap for Computational Communication Research”.
- [70] J. J. Zhu, T.-Q. Peng, and H. Liang, “Computational communication research (CCR): An early and active adopter of computational social science (CSS),” *Chinese Journal of Sociology*, vol. 11, no. 1, pp. 5–30, Jan. 2025, doi: 10.1177/2057150X251317548.
- [71] W. McKinney, *Python for data analysis: data wrangling with pandas, NumPy, and Jupyter*, Third edition. Beijing Boston Farnham Sebastopol Tokyo: O’Reilly, 2022.
- [72] C. N. Knafllic, *Storytelling with data: a data visualization guide for business professionals*. Hoboken, New Jersey: Wiley, 2015.
- [73] A. Abdullah et al., “Mapping inclusive democracy through communication research: Bibliometric perspectives in Indonesia,” *Jurnal Ilmu Sosial*, vol. 25, no. 1, pp. 92–109, Jun. 2026, doi: 10.14710/jis.25.1.2026.92-109.

- [74] A. Bruns, *Are filter bubbles real ?* Cambridge: Polity Press, 2019.
- [75] T. H. Davenport and J. C. Beck, *The attention economy: understanding the new currency of business*. Boston, Mass: Harvard Business School Press, 2001.
- [76] J. Jayus, A. Abdullah, S. Sumaiyah, I. Wilindaya, and M. Mustafa, “Publisher Rights for Quality Journalism: Opportunities and Challenges in Indonesia,” *JKM*, vol. 18, no. 1, pp. 84–101, May 2026, doi: 10.18196/jkm.v18i1.28841.

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