

Artificial Intelligence: A Digital Transformation Tool in Entertainment and Media Industry

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ABSTRACT

The landscape of media & entertainment industry is changing around the globe. From the artistic procedure behind the scenes to audience engagement and content delivery, Artificial Intelligence is having a thoughtful impact on the industry. There is no industry that has not benefitted from the incursion of Artificial Intelligence and automation. Artificial Intelligence is revolutionizing & embryonic the media & entertainment industry. The media and all its sub-verticals are seeing resurgence in growth. Using Artificial Intelligence, a recommendation engine can be developed which helps in improving the excellence of engagement and programming based on customer interest, trends and scenarios. Although AI has increased customer experience, employee productivity, cyber security, etc. but especially

if we talk about the entertainment and media industry, its growth was projected to increase by 14% till 2021.

This growth is developing the integration of AI in the business processes of entertainment and media industry. The entertainment and media industry has become an outstanding model of one of the most effective use cases of AI today. These days, the data storage is humongous compared to the earlier era; also the computing power is exceptional along with the smart tools for deep learning. This development gives ways to the extensive and widespread use of AI to drive media and entertainment world to fresh heights.

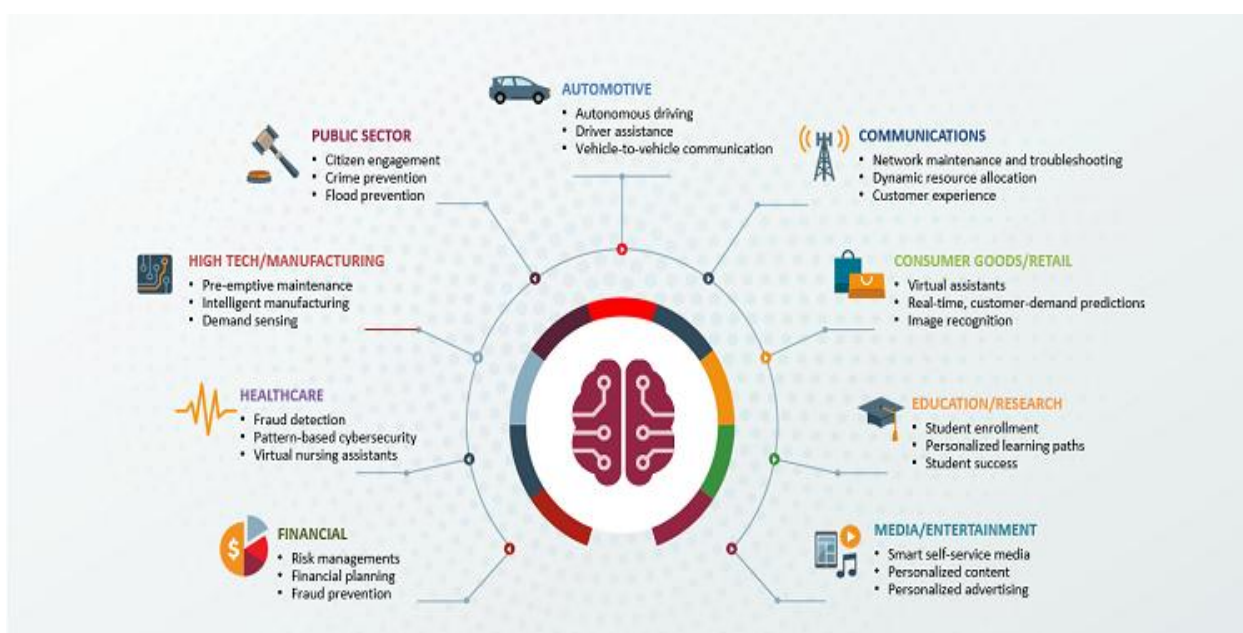
The purpose of this research is to examine the impact of Artificial Intelligence in transforming entertainment and media industry. This paper will also focus on the overall impact of AI on the business of entertainment and media industry as we know that the adoption of AI is resulting in a world that is smarter and innovative. The incredible speed with which AI is entering in every sector is forcing entertainment and media companies to get into the race to make their company efficient.

Keywords: Artificial Intelligence, Technology, Industry, Digital Transformation, Market Growth, Media & Entertainment

INTRODUCTION

By the speedy economic progress of internet and information system, digital makeover is becoming a burning matter for businesses across the globe. Improved customer awareness and widespread education accomplishments have increased the use of digital technologies in enterprises. Digitization focuses on creating, controlling and integrating a well-structured operating model with different processes so as to re-envision the goals and redefine the way different functions interact. The 21st century is a service-driven economy which is marked by different information and communication technologies, such as mobile commerce, social media, cloud computing, knowledge management, Artificial Intelligence, E-commerce, digital organization and, big data analytics. Organizations are increasingly transforming themselves by changing customer relationship dynamics and internal process, which in turn is helping them to turn out to be globally responsive so as to respond to the environmental

changes in real-time. Artificial Intelligence is a very rich and diverse field which is having applicability in a wider industry spectrum - automobiles, telecom, healthcare, retail, entertainment, education, banking, insurance, credit cards, FMCG, apparel, durables, media, business services and tourism. Artificial Intelligence encourages digital customer engagement which brings down cost and brings more flexibility to the organization. AI focuses on learning from experience and alters their processing and behaviour based on those learning.



Source: <http://www.evosysglobal.com/ai-and-chatbots-solutions>

Artificial Intelligence replicates human intelligence process with the help of technology and innovation. AI illustrate as the study of intelligent agents. Any device that notices its environment and takes actions that exploit its chance of successfully attaining its goals. The term Artificial Intelligence is frequently used to define machines or computers that follower "intellectual" functions that humans subordinate with the human mind, such as "learning" and "problem-solving".

AI starts with what matters the most to customers such as AI has powered to live 360-degree video streaming also with the ease of using it or mobiles anytime, anywhere. Capturing & engaging customers on trigger-based live events, for example, KBC, weather predictions in cricket. Predictive analysis of the viewing content based on audience preference and better merchandising option with products & services all these benefits help improve the customer

experience and increase customer satisfaction. There's no disbelief that Artificial Intelligence can assist Customer Service immensely. Rising demand for the technology to improve processes in finance and entertainment & media industry is predicted to boost market demand. This research paper will highlight about AI that transforming the media and entertainment space and is increasingly playing a big role in improving efficiencies and contributing to growth therein. This paper will also focus on the overall impact of AI on the business of Entertainment and Media Industry as we know that the adoption of AI is resulting in a world which is smarter and innovative. The incredible speed with which AI is entering in every sector is forcing entertainment and media companies to get into the race to make their company an AI company. The Public will be capable of obtaining services from anywhere in the world using the Internet, and exploiting the unlimited, additional benefits given by entertainment and media industries that will open through the extensive usage of AI inventions.

REVIEW OF LITERATURE

Joshi (2019) Artificial Intelligence is next industrial revolution in the entertainment industry. The author focuses on various fields which are influenced by AI such as production of movies, video games, moderation, sports broadcast, personalization, content classification and categorization, movie marketing, etc. Media experts recognize that AI will improve efficiency by automating numerous recurring tasks and propose a competitive benefit. AI-based mechanization can help entertainers and content originators pay out extra time on their skill and convey engaging content. AI will also aid production houses compose informed decisions about marketing and advertising by investigating significant data.

Caramiaux, Lotte, Geurts (2019) In this document, we showed that AI technologies can have multiple uses for media and creative industries, at three main levels: at the creation level - creating new media content, at the production level - editing and processing content, and at the consumption level - using and interacting with the content. AI tools at these three levels have proven and/or will prove to be relevant and useful for a wide range of media and creative applications, being used for sound and music, images and videos, video games, design, engineering, news, social network or accessibility, among possibly many others. For

instance, AI tools have been or could be used to provide personalized media content to consumers, using recommender systems or by modelling these consumers, in order to propose them automatically music, movies, news or games that they are likely to enjoy, or by even dynamically adapting the content providing to them to maximize their user experience.

Verma (2018) The media and entertainment industry are at the cusp of a rapid transformation with digital media taking centre stage across all sub-sectors - TV, print, films, advertising, animation & VFX, gaming, OOH, radio and music. The core area which is impacted by AI is deep learning, cognitive AI, AR/VR, real-time streaming, predictive analytics. Author states that the Indian media & entertainment industry is expected to grow at 14% till 2021 with advertising revenue anticipated to augment at a CAGR of 15.3% in the same time. The speedy rush in digital consumption is forcing the media & entertainment industry to relook their business models & strategies.

James (2018) Author discussed the influence of Artificial Intelligence in the field of media industry. AI is impacting content creation to enhance the consumer experience as well as transforming the media and entertainment business. With the help of AI tools, it can predict demand to regulate resources or to foresee probable interruption in the content supply chain. AI can blow the user experience by assisting them with recommendations and curating content base on consumer fondness. The author states that AI is the face of creativity which is driving media business.

Nair (2018) Author focused on the significant input that AI has made in the entertainment segment. AI enhances the gaming experience. AI has also proved to be competent in creating artistic content with IBM Watson. AI generating music is also reshaping the music industry such as Apple, Spotify is using an AI algorithm to give right music according to the user's taste, choice, etc.

Lu (2018) Author highlighted the four major categories where AI is involved i.e. marketing & advertising, personalized services, search & classification, and experience innovation. According to the PwC report, the revenue of M & E industry will cross \$2.2 trillion in upcoming years. The expansion has brought a lot of companies under the umbrella of Artificial Intelligence.

Morss (2018) Artificial Intelligence is increasingly helping as a mechanism that brings comfy and realistic experience in the media and entertainment industry. Article highlighted the use of AI in entertainment industry. Businesses are training machine learning algorithms to facilitate build-up film trailers and intend advertisements. Artificial Intelligence helps to boost the velocity and efficacy of the production process.

Jain (2017) Executives in all industries are realizing the unstoppable potential of Artificial Intelligence. They are becoming conscious of the fact that AI is not a matter of any single technology but an amalgamation and integration of different related technologies so as to get good quality products and services at low cost and in less time. This will have an overall impact on the performance of a market, organizations and on the holistic culture of the organization. In order to get high returns on the investments, it is essential for an organization to identify Key areas in Manufacturing, Marketing, Finance and HR, where AI can be applied effectively.

Liang, Shen (2017) customers participate in the production process as if a team member, they support the brand with ardour and pay more for merchandise associated with their artist. Fans feel that their favourite artist or star is a part of their lives as if a friend or even a family member. By leveraging the fan economy, media and entertainment companies in China are leveraging social media and fans' emotional capital to create more robust product offerings through fan collaboration during the production process while enhancing the loyalties of their fan bases, which leads to increased spending per fan (via up selling). This, in turn, leads to an increase in ARPU and the strengthening of the Chinese media and entertainment industry as a whole.

RESEARCH GAP

As per the earlier study on Artificial Intelligence on entertainment and media industry, we have gone through most likely on innovation, technology, computer efficiency, economy boost up, etc. if we talk about the entire business segment of entertainment and media industry, the introduction of Artificial Intelligence have not reached out yet. So, we decided to boost up Artificial Intelligence to look upon the immediate services and utilities in all the entertainment and media sectors which improve the efficiency of public inquisitiveness.

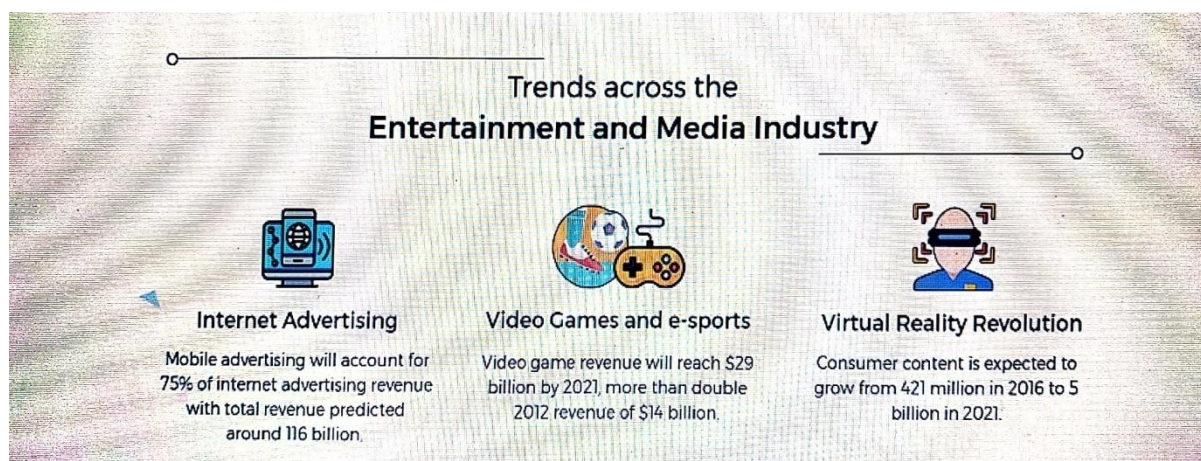
OBJECTIVES

- To study the impact of Artificial Intelligence on media & entertainment industry.
- To analyze the effect of AI on media & entertainment business.
- To study the AI solution in media & entertainment industry.

RESEARCH METHODOLOGY

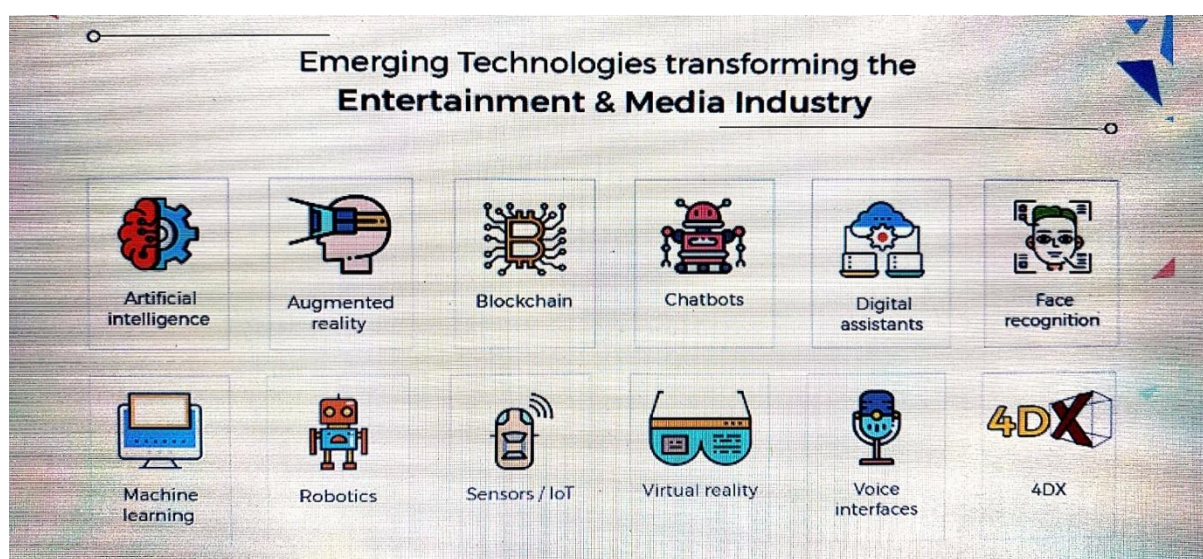
The data collection for this research paper is stimulated by the methodology of the systematic literature review. The research methodology which has been applied during the research study is descriptive in nature. The collection of data is done on a secondary basis, and the research is strictly done to meet the objectives set for the present research. The data and information which have been furnished in the study have been taken from the diverse secondary sources. Various reports, articles and conferences, on Artificial Intelligence have been referred in the present research paper.

GAMES AND ENTERTAINMENT INDUSTRY



Source: <https://www.hiddenbrains.com/blog/role-of-technology-in-the-entertainment-and-media-industry.html>

AI was initially adopted by the gaming sector as compared to any other media & entertainment industry. The magic of Artificial Intelligence & technology can clearly imagine and sense in the gaming industry. Technological evolution concerning visual effects is reaching to the new bars of success. This can be evidently visualised in various games such as Super Mario, Call of Duty, Fallout 4, etc. The introduction of Artificial Intelligence in the gaming sector has perked up the experience of using animations and graphics. AI facilitates to enhance user experience as well.



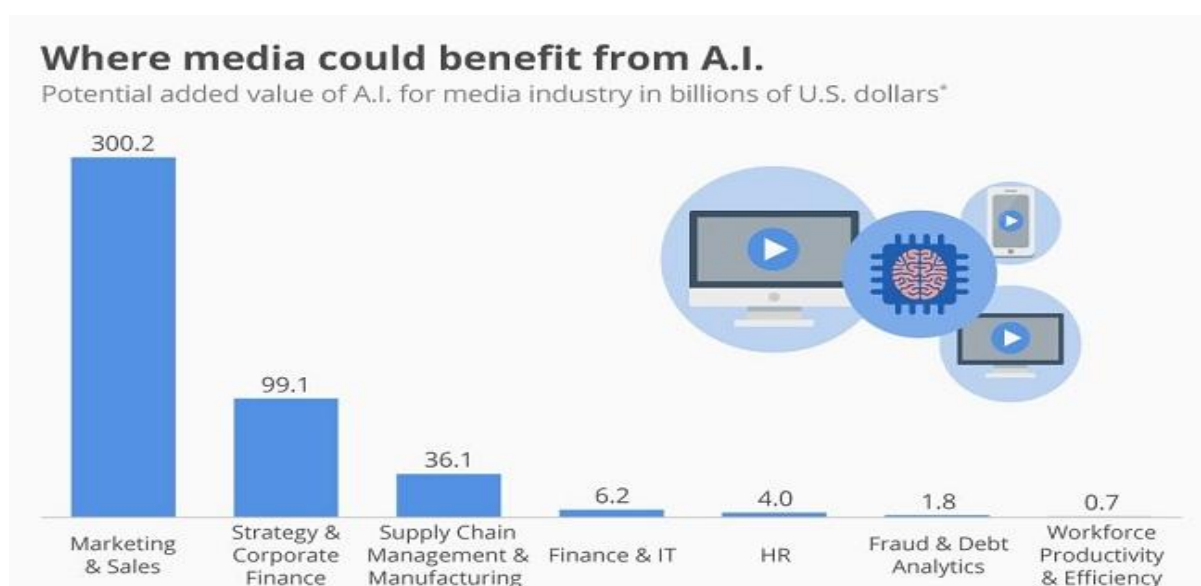
Source: <https://www.hiddenbrains.com/blog/role-of-technology-in-the-entertainment-and-media-industry.html>

The above picture consists of a few emerging technologies transforming the media & entertainment industry.

TRANSFORMATION OF MEDIA & ENTERTAINMENT BUSINESS THROUGH AI

AI is impacting everything from the formation of content to the user experience. Artificial Intelligence is a brainwave to all divisions of the media value chain, it is helping a content writer to be innovative, content editors to be artistic and content consumers to find the content according to their interest and present situation. AI is assisting human imagination and human interest by taking a lot of the leg work out of finding linked content, piloting hefty amount of content, and re-formatting and re-purposing content.

Media companies can influence Artificial Intelligence through their content source chains to mechanize operations, drive decision-making and mark the consumer experience. Through techniques such as image recognition and speech-to-text transcription, metadata tagging is the most prevalent application of AI so far. Media companies can also use AI to maintain their analytical expertise. For example, AI tools can be used to forecast demand to bend resources or to foresee probable disruptions in the content supply these use cases could bring extensive savings to media companies.



Source: Mckinsey Analytics

AI helps to personalize the user experience. Perhaps most considerably AI will be at the front position of inventiveness – the vigour that eventually drives the media business. Artists equipped with an AI facilitate feedback loop support on real-time, which in turn augment production and commercial return on investment

ARTIFICIAL INTELLIGENCE IN ENTERTAINMENT

The band of entertainment and media industry covers various divisions such as television industry, film industry, etc. This paper will focus on the application of AI in the media & entertainment industry to offer the market leaders deep knowledge regarding the modern and budding fashion that may possibly blow their business.

Entertainment and Media AI Applications Overview

It is majorly bifurcated into three categories.

Marketing and Advertising

This segment encompasses media hype, promotion of movies, visual design, etc. With the introduction of Artificial Intelligence, the scope of marketing and advertising can be perked up to boost effectiveness. AI enhances the productivity & work efficiency of humans. IBM creates a trailer for the horror movie “Morgan” by using their AI system Watson. Watson only took 24 hours to produce a six-minute movie trailer for which a human being can take several weeks.

Personalization of User Experience

In this VUCA world (volatile, uncertain, complex and ambiguous) there is only one boss i.e. customer. User experience personalization is becoming a key area for any business. With the help of Artificial Intelligence, companies are generating personalized services for masses. These comprise the recommendation according to the customer taste, preferences, last browsing history and fluency of usage.

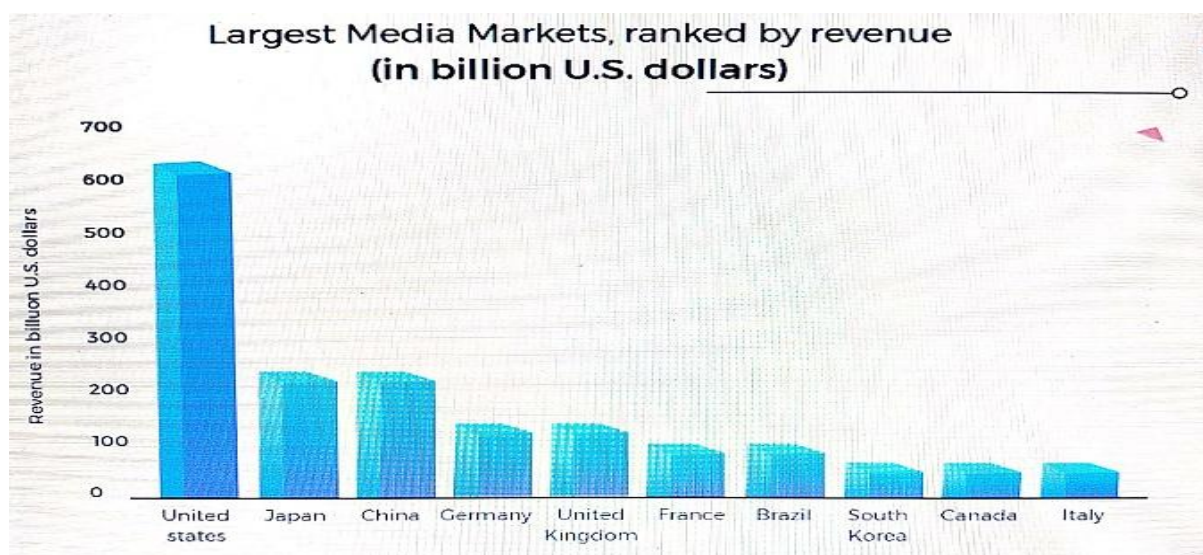
Netflix – Machine Learning Workflow Management

It is important for any business to know what its target audience wants. AI facilitates to manage machine learning algorithm to give recommendation and suggestion on videos. Now personalization is becoming a benchmark to boost the user experience.

Search Optimization

Not every user seeks for the same thing so Artificial Intelligence offer customer centric search. AI is helping users to optimize the precision of search results. Internet posses a humongous amount of unstructured data. AI assist in shaping voluminous data to provide customer centric

search. Encroachment in innovation and technology has helped Google to augment its search engine in many ways. Artificial Intelligence assist Google to post its advertisement properly for example dog food ad come into view on a pet related website on the other hand nonveg cheese pizza advertisement will not appear on a site for vegetarians.



Source: <https://www.hiddenbrains.com/blog/role-of-technology-in-the-entertainment-and-media-industry.html>

AI SOLUTIONS

There is no industry that has not benefitted from the attack of AI and mechanization. The media and all its sub-verticals are seeing renaissance in development, thanks to priceless insights and solutions enabled by AI and automation.

Enhanced Advertisement Landscape

- ✚ Machine learning algorithm assist to design & insert relevant advertisement based on the content.
- ✚ AI facilitates smart advertisement inventory management.
- ✚ Broadcasters can insert ads into their offering by using AI to settle on the ideal advertisement.

Privacy Management & Content Security

- ✚ AI aids in digital right, IP and royalty management.
- ✚ Contract intelligence & compliance.
- ✚ AI helps in content authenticity verification & digital identity.

Enhanced Customer Journey & Content

- ✚ With the help of AI, a recommendation engine can be developed which perk up the excellence of engagement based on user's preference, taste and trend which will convert an anonymous user into a registered user.
- ✚ AI can help to boost customer contentment & engagement.
- ✚ AI aid in right dissemination of content to customers.
- ✚ AI assists improved categorisation of content or media that permit user to rapid searches on the relevant sites.
- ✚ Automated content augmentation.

Service Enhancement

- ✚ AI assists in automated editorial and optimising cost of creation of content.
- ✚ AI based AR/VR boost customer voyage.

Process Improvement

- ✚ AI enables system maintenance & support.
- ✚ AI helps to digitize, automate & analyze the metadata attributed content.
- ✚ AI assess the performance of content advance analytics and advertising campaign

effectiveness.

CONCLUSION

The potential of AI in the media and entertainment industry is enormous. Different organizations across the globe have accepted AI in media and entertainment industry to accomplish different tasks to create content and present it. Perennial improvement in technology has made Artificial Intelligence such a strong tech-base that has overturned the media & entertainment industry and rocketed it to the next height. With the development of AI applications in the entertainment and media industry, its importance has come into existence, even more, giving rise to different business verticals such as marketing, content development, and advertisements. Remodelling of technology will definitely save time and energy for working professionals and the industry and also enhance the efficiency of the production process. Artificial Intelligence is one of the biggest blessings for the entertainment industry with extreme improvements in advance gaming, film making alongside the music mixing and arts industry. The modern machines with advance AI panels and super-intelligent algorithms that are growing exponentially, AI is going strong while making all tasks simple those are way too complex for the world.

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