International Journal of Computer Science
Scholarly Peer Reviewed Research Journal - PRESS - OPEN ACCESS
ISSN: 2348-6600
http://www.ijcsjournal.com Volume 11, Issue 1, No 3, 2023. ISSN: 2348-6600
Reference ID: IJCS-469 PAGE NO: 3193-3197

TECHNOLOGICAL EVOLUTION IN THE FILM INDUSTRY

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Abstract:

The film industry has undergone significant changes in recent years, including advances in technology, changes in distribution methods, and shifts in consumer behaviour. This research paper provides a comprehensive analysis of the evolution and future of the film industry. It explores the history of the film industry, including the rise of Hollywood and the emergence of new players in the global market. It examines the impact of technological advancements, such as digital film-making and streaming services, on the cinema industry. This paper also explores the changing landscape of distribution, from traditional theatrical releases to online platforms, and the implications for film production and marketing. Finally, it looks at current trends and predictions for the future of the film industry, including the rise of international markets and the potential impact of artificial intelligence on film production.

Keywords: Film Industry, Streaming Platforms, Social Media, Virtual Reality.

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1. INTRODUCTION

The film industry is a dynamic and rapidly evolving sector that has undergone significant changes in recent years. With the advent of new technologies, changes in consumer behavior, and shifts in distribution methods, the film industry has had to adapt to stay relevant and competitive.

On July 17, 1896, the Lumière Brothers released their first film s creening at the Watson Theatre in Bombay. This was just six months after their first show in Paris. Indian cinema thus has more than a hundred years of history, like the European and American cinema industries. In 1914, Raj Harish Chandra was the first Indian film to be screened in London.

Although India's first film industry ma gnate, Dadasaheb Phalke, oversaw and managed the production of 23 films from 1913 to 1918, the initial growth of the Indian film industry was not as rapid as that of Hollywood.

The film industry includes the technical and commercial establishments of production, namely film production companies, film studios, cinematography, animation, film production, screenwriting, pre-production, post-production, film festivals, distributors and actors. The key elements involved in film production are film type, shots, camera angles, lighting, colour, sound or audio, editing and mise-en-scene.

The film production process (Figure 1) has three key stages: pre-production, production, and post-production. Before pre-production, the core concept of the film is developed. After post-production, the distribution of the film will be decided.

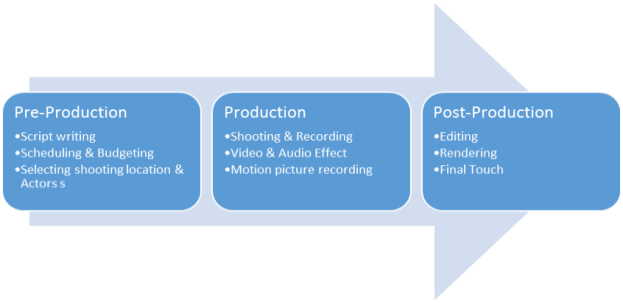

Figure 1: Stages of Film-making

2. CAMERA TECHNOLOGY IN PRODUCTION

A digital movie camera for digital cinematography is a video camera that captures footage digitally rather than the historically used movie camera, which shoots on film stock. Different digital movie cameras output a variety of different acquisition formats. Independent movie-makers have also pressed low-cost consumer and hybrid prosumer cameras into service for digital cinematography.

Though image quality is typically much lower than what can be produced with professional digital cinematography cameras, the technology has steadily improved, most significantly in the last several years with the arrival of high-definition cameras in this market. These inexpensive cameras are limited by their relatively high compression ratios, their small sensors, and the quality of their optics. Many also have integrated lenses which cannot be changed.

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The dual-camera VR is an innovative movie-shooting technology that brings the real world into the VR realm. In this technology, one camera shoots the movie characters, while another alternate camera can shoot the surroundings in the best places. When we integrate both visuals with VR, it gives an immersive 360-degree viewing experience to the audience.

2.1 3D & 4K-8K TECHNOLOGY

3D technology, coupled with 4K technology, has transformed the experience of sci-fi movies and action dramas. Filmmakers can use the Lucid camera, virtual reality (VR) technology, and high-description formats to shoot three-dimensional (3D) videos at 4K or 8K resolution. This technology helps filmmakers shoot aquatic scenes, multiple angles, and high-octane action scenes to deliver an immersive experience to the observers.

In the early 1990s, 3D movies were watched using paper-made 3D glasses. Now, an incremental change in multi-dimensional movie technology has reached a stage where the 3D viewing experience is feasible without any external gadgets or spectacles.

Now cinema has moved to 7D or 8D movies, where the audience can experience computer-controlled swings, shakes, falls, rises, sprays of water and air, and other special effects. Multi-dimensional technologies let the audience enjoy the visual, auditory, dynamic, and tactile aspects of the movie.

3. EDITING IN POST-PRODUCTION

Editing comes in the post-production stage, where digital technology helps the editors work on multiple sections and piece them together to make a clean movie. Film-editing software helps editors combine the film clips, sound clips, special effects, CGI, and various other treatments into the raw file easily. With the use of digital technology, the editor can make an unlimited number of errors and fix them to get a much cleaner output.

3.1 PRESERVATION

The preservation of conventional films used to be very cumbersome and expensive, with many logistical challenges. Digital movies have mitigated all such concerns, as now we need a few gigabytes of storage space instead of the large physical storage of film. Digital copies of movies can be stored on servers at a fraction of the cost of storing the physical films.

3.2 FILM DISTRIBUTION

Digital technology has enabled filmmakers to distribute their movies to a larger audience at almost no additional cost. Filmmakers can distribute their movies on Over the Top (OTT) platforms (Figure 2) to tap audiences beyond the traditional theatres and multiplexes. The movie rights can be distributed to consumers digitally, which opens up an exhilarating new world of film distribution.

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Figure 2: OTT Platform

4. IMPACT OF DIGITAL TECHNOLOGY ON FILM INDUSTRY

Technology has indeed helped filmmakers reduce the overall cost of moviemaking. Filmmakers can shoot, edit, preserve and store the digital clones of their movies, which cost relatively less if we compare them with the raw material films. The use of digital cameras and other technologies helps produce a movie in less time than conventional film cameras. The digital format also enables moviemakers to complete their schedules in a very short time with almost negligible waste, thus keeping the design cost under control.

Digital cinema, the use of digital technology to distribute or project motion pictures, has also largely replaced the historical use of reels of motion picture film, such as 35 mm film. Whereas traditional film rolls had to be packed for movie theatres, a digital movie can be distributed to cinemas in a number of ways: over the Internet, through satellite links, or by transferring hard drives or optical discs similar to Blu-ray discs.

Digital films are projected using a digital projector (Figure 3) instead of a conventional film projector. Digital cinema is distinct from using high-definition television and is not dependent on using television or high-definition video standards or frame rates. In digital cinema, judgement are represented by the horizontal pixel count, generally 2K (2048 × 1080 or 2.2 megapixels) or 4K (4096 × 2160 or 8.8 megapixels). As digital film technology improved in the early 2010s, most cinemas across the world converted to digital.

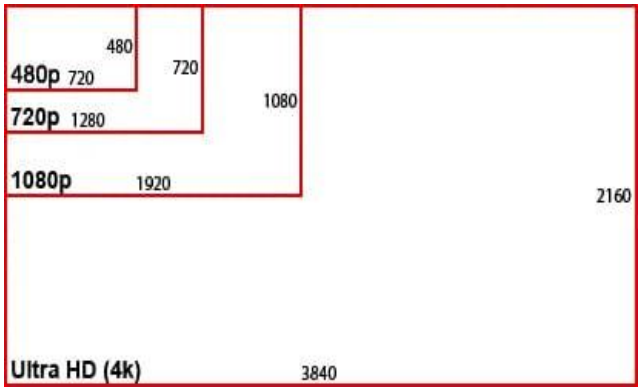

Figure 3: Digital Projector

5. CONCLUSION

The following technologies such as filming equipment for phones, digital re-creation, drones, virtual reality and algorithmic video editing (digital editing) are the future advancements in the film industry. Generally, it is hard to define what kind of industry is more influenced by the development of digital technologies because

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much depends on the objectives set in a certain industry, nature of work required, professionalism, etc. The impact of digital distribution is crucial indeed and not only for film making industry but also for those industries which advertise movies and translate them on theatres an on TV. Due to the major influence of recent advances in digital technology on the film industry, it is important to understand its business models so that employees may overcome setbacks, come up with quality work, and establish desired outcomes. In future, artificial intelligence may transform the film industry in unimagined level.

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