

Data-driven Media Supply Chains

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Interra Systems:

3 Reasons Why Automated AI/ML-Based QC is Critical for the Future of Media Content Delivery



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Media content delivery is changing. During the COVID-19 pandemic, OTT video consumption soared to new heights, and that trend will continue into the future. **According to Acumen Research and Consulting**, the global video streaming market is expected to grow at a CAGR of around 12.2% from 2020 to 2027, reaching a market value of over \$843.1 billion by 2027.

Viewer expectations are not the only change happening in the video world. Workflow enhancements and technology innovations are transforming the way broadcasters and media companies create, deliver, and inspect the quality of content.

As broadcasters and service providers look to improve content quality and deliver the highest-quality viewing experiences to audiences around the globe, they will increasingly rely on AI and ML technologies, combined with computer vision techniques. Here are three reasons why.

Consumer Tastes are Evolving

Diversity and choice are abundant in the OTT environment. Today, consumers can watch media content on a variety of different screens, including TVs, smartphones, tablets, and PCs. There are also many different services consumers can choose from, including Netflix, Hulu, HBO Max, NBCU Peacock, Disney+, Amazon Prime Video, and more. Having so many options available has set the bar extremely high for quality of viewing experience.

Consumers expect exceptional quality content on every screen. Research firm Sensum found that a viewer's negative emotions increase 16% while engagement decreases nearly 20% as a result of poor-quality streaming experiences. The survey also found that 76% of participants would stop using a service if issues occurred several times. With AI/ML-based quality control (QC) technologies, broadcasters and service providers can ensure that the experience they are delivering is of the highest quality, while also ensuring that processing time is kept to a minimum.

Content Volume is Growing

OTT technology has globalized content delivery. Through an OTT service, broadcasters and service providers can seek out new audiences and expand their reach. This means service providers are preparing video content in a wide range of different languages, which requires them to account for national and regional regulations, dubbing, and captions. Content must also be prepared to support the multitude of devices that exist today. Each device has a different screen size and supports different formats. Since there are so many variations to maintain and a massive amount of content to manage, broadcasters and media companies need more efficient methods for QC. ML/AI-based QC solutions speed up the QC process, allowing broadcasters to achieve higher levels of productivity, greater operational efficiency, and improved accuracy.

Modern Media Content Workflows are Complex

OTT video consumption has skyrocketed, and as a result video creation, preparation, and delivery processes have become much more complex, yet there is still a requirement to make the process as speedy as possible.

Traditionally, broadcasters and media companies relied on visual inspection methods to detect issues with audio and video streams. Now broadcasters and service providers are handling a higher volume of content, with multiple output requirements, and manual methods are too time-consuming and inconsistent. Using automated AI/ML-based QC solutions, broadcasters and media companies can prepare content faster, taking into account the need for multiple encoding formats, resolutions, audio, and captions in

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multiple languages, with audio suited for the different fidelities of end devices, and with multiple delivery mechanisms.

Applying AI/ML QC in the Real World

AI/ML used within automated QC processes enables broadcasters and service providers to operate faster and more efficiently, bringing increased consistency and reliability to certain media tasks, such as content quality checks, compliance, classification, content categorization, lip sync checks, and more.

Using a fully comprehensive, automated QC system, broadcasters can rapidly check the quality of myriad video and audio formats, as well as checking the quality of closed captions and subtitles. As broadcasters expand their reach into new countries, AI/ML-based QC solutions will help them to ensure that content complies with all industry and government regulations and address the various OTT and on-demand delivery ecosystem requirements.

AI/ML technologies are expected to play an increasingly crucial role in enabling broadcasters and media providers to generate metadata for content classification purposes. Content classification is important for VOD and OTT delivery, enabling broadcasters to censor certain types of content, identify celebrities, and detect the presence of brands or objects within content. Previously, this kind of analysis would have required human decision making at every level.

In addition, AI/ML auto QC solutions leveraging image processing, ML technology and deep neural networks can aid in quick, precise identification of lip sync issues and facial recognition, optimizing the quality of experience for viewers. Lip sync issues have long been one of the most noticeable errors that consumers find irritating, and can lead to consumer churn. The latest AI/ML models, designed for broadcaster and media company use, can speed up the identification of such errors across multiple content formats. With automated and AI models for data analytics, broadcasters can gain unique insights into viewing behavior and further enhance QoE.

Finally, good captioning, subtitling, and audio description have become an increasingly key requirement for media content today, and ML is effective at checking for the presence and accuracy of these services.

Conclusion

Given the rapidly evolving broadcast landscape today, changing viewer expectations, and massive volume of content that is distributed to global audiences, it is more important than ever for broadcasters and service providers to deploy auto QC solutions that offer more than basic audio and video checks. Broadcasters need solutions that offer increased efficiency, speed, and accuracy for classifying and categorizing content, performing lip sync checks, and adding captions. Recent innovations in AI and ML technology are paving the path toward higher-quality video experiences.

