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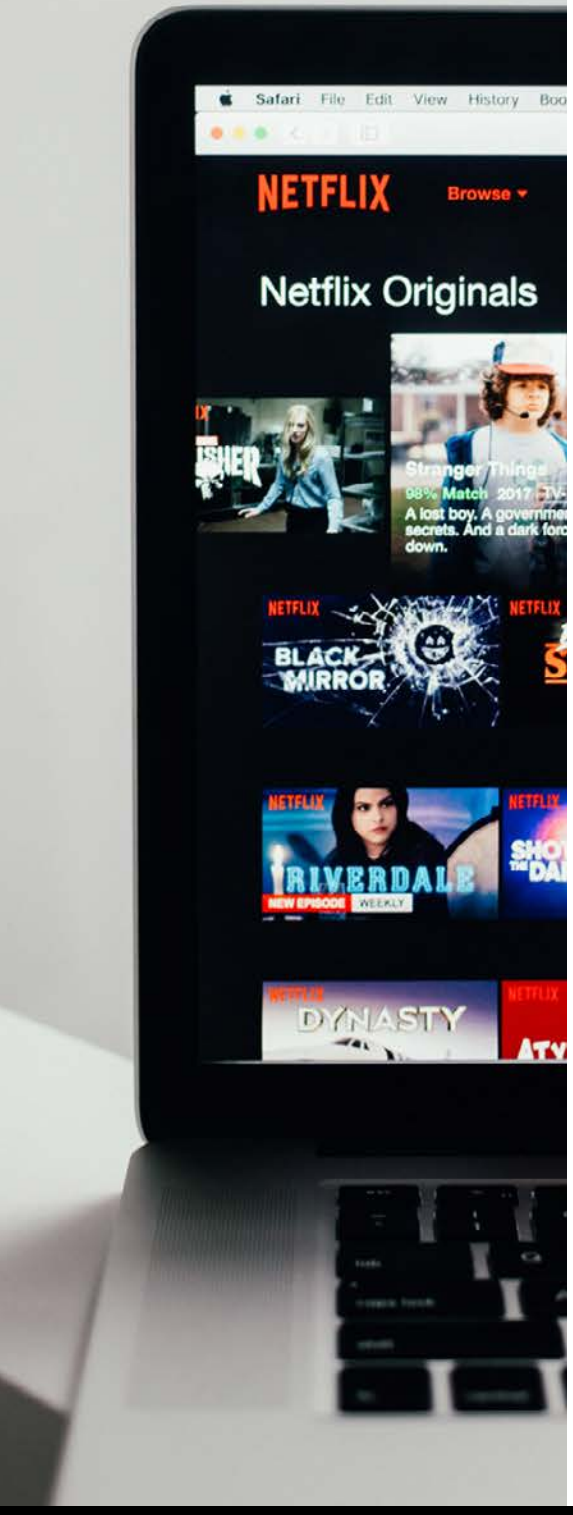
Accelerate Your Media Trajectory With AI



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If you are in the automotive industry, healthcare, retail or something else, everyone is talking about Artificial Intelligence. Many consider it a lot of hype at this stage. The media industry is no exception; from NAB to IBC, from Europe to the US, this phrase is resonating on every industry event floor.

We can argue for a long time whether AI will boost the economy or kill industries, how many new innovative businesses will emerge, how many people might become unemployed, how secure AI-based solutions might be, and so on. But let's leave aside these "philosophical" aspects and focus more on the potential it has to grow your business and capabilities.

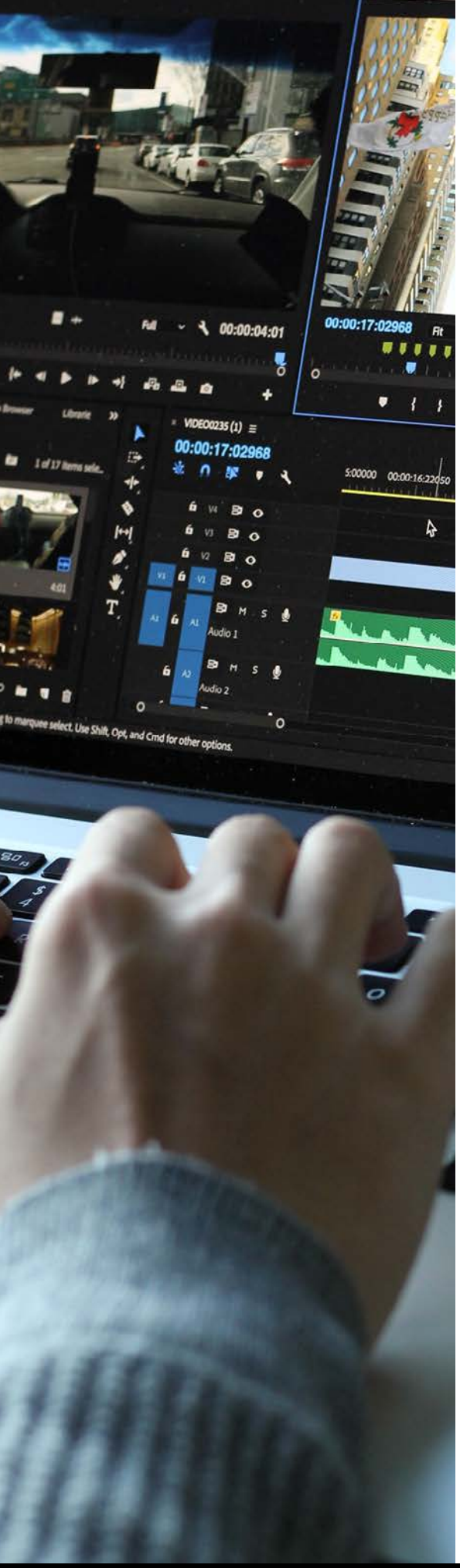
AI is Already Gaining Traction

Most media industry players already boast some kind of AI-based implementation within their business workflows. Netflix can easily be called a pioneer because of its intelligent cast compilation and viewer data analytics[1] (e.g., *House of Cards*). The sophisticated deep learning and computer vision algorithm that is applied to its recommendation engine, which is far beyond the industry standard and is still evolving[2]; as well as its video encoding, which analyzes each shot in a video and compresses it without affecting the image quality and reduces the amount of data used.[3]

In a nutshell, if you have specific, well-defined tasks that consist of repetitive and not creative work, then it might be a good case to consider the power of AI.

Predicting Customer Issues

Comcast uses machine learning models (among other solutions) to predict customer issues right before they occur. According to Adam Hertz, VP of Engineering at Comcast, their technology is 90% accurate in terms of predicting if a technician needs to drive to a subscriber's home to fix a connectivity problem.[4] Major tech vendors like Amazon, Microsoft, IBM, and of course Google are also



working hard in this direction. For example, Microsoft and its Azure AI platform. Using pre-built AI, to customizable ML and deep learning services and tools, you can find everything you need to upgrade your solutions and services with cognitive capabilities, natural language processing, etc.

Creating Relevant Movie Trailers

20th Century Fox and IBM Watson used APIs and machine learning techniques to analyze hundreds of horror and thriller movie trailers. After learning what keeps audiences on the edge of their seats, the AI system suggested the top 10 best candidate moments for a trailer from the movie *Morgan*, which an IBM filmmaker then edited and arranged together[5]. Since then, 20th Century Fox uses AI and deep learning models to predict which audience will most likely see a film based on the film's movie trailer. They can accurately predict audience type and attendance for existing movies, and to-be-released movies.[6]

Noise Free Image Quality

The same is true for other media and entertainment giants. Disney is working hard on mixed reality and augmented reality projects, robotics and human-computer interaction, computer vision, etc. On the AI front, Disney and the University of California used a deep learning approach to denoise Monte Carlo-rendered images, which produced high-quality results suitable for production. For the film *Finding Dory*, a special convolutional neural network was trained to learn the complex relationship between noisy and reference data across a large set of frames with varying distributed effects, and produced noise-free image quality. Now it can be applied to other films, as well.[7]

The Future of Editing

Industry incumbents, as well as new-gen video services, spend billions of dollars on original content.[8] Of course, AI is not currently in a position to create content on its own, even though we do have such examples available. (In the movie *Zone Out*, AI was responsible for everything from script writing to video editing[9]). But intelligent technology solutions can help human directors produce pixel-perfect videos. AI can analyze your entire footage to select the best possible shots per specific needs: proper color scheme, right actor emotion, best place to cut or merge scenes, etc. Things that are not possible for the human eye to detect are simple to do for AI-based software. An engine that is capable of putting together the best scenes can create custom ads on the fly, more engaging movie trailers, and more.

User Experience

Apart from original programming, the way you interact with customers will define if they stick with your service or not. The most common way is through targeted content and sophisticated recommendations, which is good, but not enough. It's important what you recommend, and how you recommend it. Good examples include custom pages or screen layouts, banners tailored based on your profile data, payment workflows specific to your habits and preferences, etc. You can also imagine an intelligent advertising system capable of serving relevant content and defining a user's relevant emotional state to properly time the insertion of the ad.

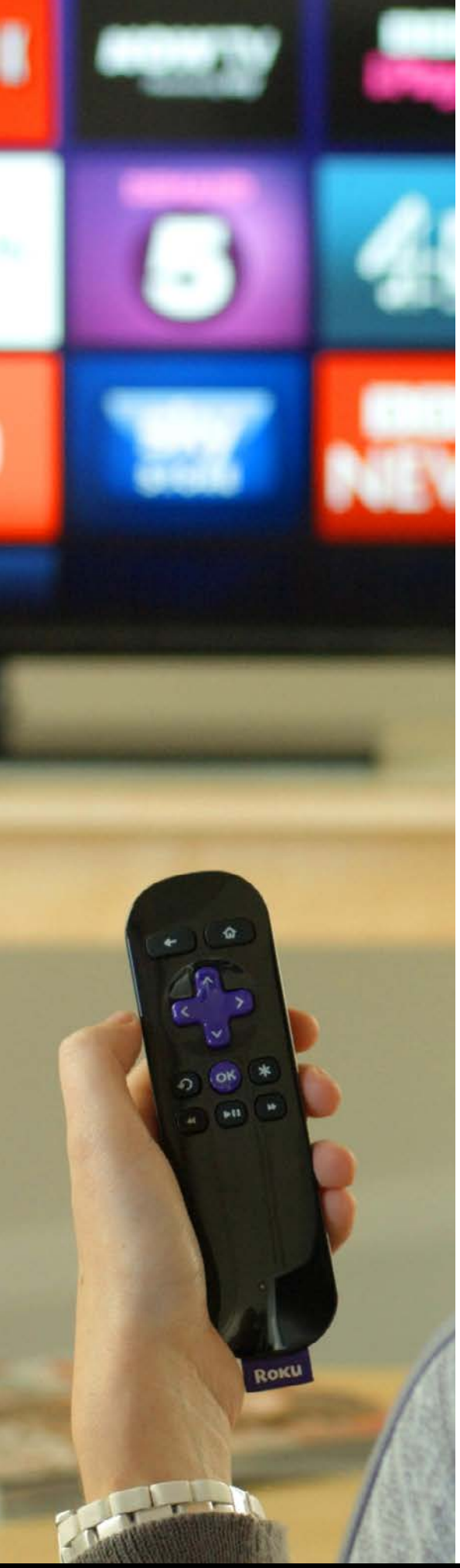
Video Workflows

The following items could define user experience in the long run, but they still deserve a separate category. We can start with tagging and video indexing. It used to be quite a slow and labor-consuming process. Recent computer vision development can save you a lot of money with automated metadata extraction, increasing your insight about specific footage, deep and niche like never before.

The way your video is streamed is also very important. And again, AI already contributes here, ensuring the best possible image quality while optimizing network usage, utilizing intelligent fault diagnostics during video delivery instead of manual alerts configuration, making your content accessible internationally or for hearing-impaired audiences by means of subtitling and captioning, and so on.

It's Not as Complicated as We Might Think

There's one perception that may bother you about AI: the cost of implementation. Depending on your goals, available basis, interactions with third-party tools, the complexity of specific workflows, etc., the cost of your project could skyrocket. In reality, purpose-built AI is attainable. The market is full of various tools, frameworks, libraries, and datasets that are ready to be leveraged. For example, Tensorflow, Keras, Microsoft Cognitive Toolkit, MXNet, Torch, Chainer are only some of the available open source frameworks for deep learning. Training datasets is not an obstacle for machine learning anymore— through facial recognition, object detection and recognition, sound data (e.g., speech and music), text data, etc. Just take what you need!



Thanks to the development of artificial intelligence, the marketplace is becoming a whole lot more competitive. That is not hype or buzzwords: that's reality. And with the right partner guiding you through the process AI can accelerate your trajectory to achieve a competitive advantage in the media landscape.

About GlobalLogic

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