



## Deepfake videos enable an Asian news broadcaster to bolster its expansion strategy with minimal investment

**An Asian broadcaster with 1.3 billion viewers across 173 countries, with channels spanning entertainment, news, and sports wanted to expand its reach. They needed an out-of-the-box solution to provide current affairs programs to an audience viewing content in 12 plus regional languages.**



<https://akaiketech.com/usecase-mbc>

### Industry Overview

In the post-pandemic ecosystem, with changing consumer habits, the industry is likely to focus on cost-efficiency, revenue enhancement opportunities, and profit protection with greater technology integration. For a 4-5 year period, the revenue growth globally is projected to be at 4.5% CAGR. Asia is expecting growth at 17% CAGR, and India at 11% CAGR over the same period amounting to INR 4.5 Trillion by 2023.

### Business Challenge

This prominent English news brand wanted to expand into the fast-growing regional market and establish themselves as a premier news source regionally.

They were looking to broadcast news programs that focused on local events and test their regional expansion strategy by re-using newsroom footage with AI-powered synthetic speech and lip-sync.

### Solution – TTS and Video Synthesis

The broadcaster had more than 260,000 hours of video in its archives. Focusing on the reusability of the client's media assets, from the available video footage, a few of the newsroom's panel of anchors were selected.

Post video selection, an AI recipe was whipped up for image synthesis and automated lip synchronization which blended Computer Vision, Deep Learning and GAN (Generative Adversarial Networks) technology.

The custom solution converted written text to natural-sounding speech. This was achieved by using deep neural networks trained on human speech to create human-like expressive speech. The target speech segment was then accurately adapted to a video with a speaking face using GAN.

The end result was the creation of high-quality videos with accurate lip sync, composited into target video footages. In other words, the realistic and coherent AI-generated videos had the news anchor speaking the relevant text. These personalized deepfake videos passed the primary tests for a post-studio rollout.

**Harvesting and synthesizing unstructured data, and building an AI solution can be daunting and expensive. Akaike builds powerful AI solutions with the right mix of skills, internal governance and technology innovation. It fills the supply gap as a full-service lab-on-hire with pre-built solution accelerators capable of rapid prototyping across the AI spectrum.**

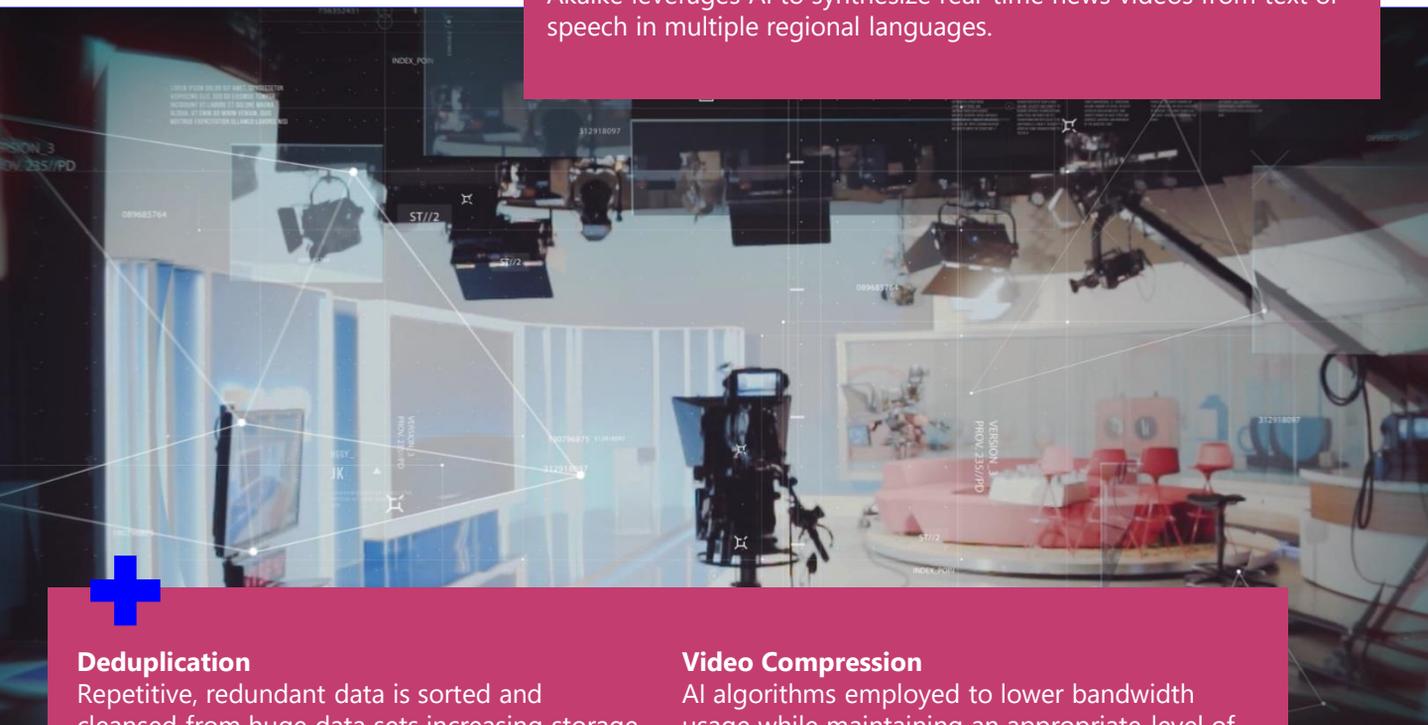
## Technology Overview

The creation of synthetic video involves a two-step approach. In the first step, the neural voice technology is used to convert language text to natural-sounding speech while ensuring that the audio incorporates proper cadence and intonation for its language to craft voices that are polished and natural.

Once the human-quality speech from input text is synthesized, it's then seamlessly fused into a video using the GAN (Generative Adversarial Networks) technology. GAN pits a primary algorithm or a generator to a second algorithm or a discriminator. Training the discriminator on noisy videos enhances its ability to measure inaccuracies in the generated videos, which improves the overall quality of the lip movement and the synthesized videos.

## Akaike's AI Powered Media Solutions

Akaike leverages AI to synthesize real-time news videos from text or speech in multiple regional languages.



### Deduplication

Repetitive, redundant data is sorted and cleansed from huge data sets increasing storage capacity requirements.

### Deepfake Detection

Deepfakes in audio, video, and images are detected with the highest accuracy using DL.

### Video Categorization & Tagging

ML & NLP is applied to generate metadata, tags, and categories to create engaging video experiences.

### Video Compression

AI algorithms employed to lower bandwidth usage while maintaining an appropriate level of quality at super speed.

### Personalized Advertisements

Ad relevancy for its intended audience is increased and personalized connections with the audience are built by leveraging ML.

### Recommendations

State-of-the-art ML models deliver personalized recommendations that suit customer preferences across multiple touchpoints.

## About Akaike

At Akaike, we love solving problems that positively impact the quality of human life. The more complex they are, the better.

We apply ML and DL to Computer Vision, NLP, and Reinforcement Learning taking inspiration from the Akaike Information Criterion (AIC) to build and deploy efficient AI models with maximum impact across healthcare, retail, manufacturing, media and other domains.

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