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Enhancing Education: Creating Informative Podcasts with GEN AI

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Abstract: The generation of educational content is being completely transformed by generative AI, which provides creative substitutes for conventional resource creation. Traditional production techniques for educational audiovisual content can entail exorbitant expenses, protracted production schedules, and little customization choices. In educational settings, these restrictions may make it more difficult to scale and adapt. This study offers a unique approach that uses generative artificial intelligence (AI) to automate the production of excellent audio and graphics tailored for educational podcasts.

This method improves the effectiveness and accessibility of instructional information by incorporating cutting-edge AI models. AI-driven image generating tools and text-to-speech (TTS) systems expedite the production process, allowing teachers to create individualized, captivating, and pedagogically sound content in a fraction of the time and expense. The design of the system architecture prioritizes modularity and scalability. accommodating a range of audience-specific voice styles and material kinds. The adaptability and efficiency of an AI-powered architecture are demonstrated by a thorough examination of model selection and implementation tactics. The resulting educational podcasts provide a more participatory and inclusive learning environment in addition to addressing the drawbacks of conventional material distribution. By showing how generative AI can turn podcasting into a potent, scalable teaching tool, this study adds to the expanding field of AI-enhanced education.

Keywords: audio-visual production, podcasting, text-to-speech synthesis (TTS), natural language processing (NLP)



