

**MALLAREDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

**(AUTONOMUS INSTITUTION – UGC, GOVT. OF INDIA)**

**Affiliated to JNTUH; Approved by AICTE, NBA-Tier 1 & NAAC with A-GRADE | ISO 9001:2015**

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**DEPARTMENT OF COMPUTATIONAL INTELLIGENCE**

**III YEAR B. TECH II SEM**

**COURSE:** APPLICATION DEVELOPMENT PROJECT - II

**COURSE CODE:** R22A66933

**SECTION:** CSE (AIML) - A

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**PROJECT ABSTRACT**

**Title:** AI-Driven Automated Video Generator for Content Creation

**Abstract:**

The rapid growth of social media has created a demand for tools that simplify content creation, enabling creators to produce engaging videos effortlessly. Traditional methods require extensive manual effort, including brainstorming, scriptwriting, video editing, and caption generation.

Existing systems provide isolated solutions, such as script generation or basic video editing tools, but lack end-to-end automation. These systems are often time-consuming and require multiple platforms, making the process inefficient. To address these challenges, our proposed system introduces a fully automated video generation bot. It streamlines the entire workflow, from keyword-based script generation to final video rendering and social media uploading. The system integrates ChatGPT for script generation, EdgeTTS for voiceovers, Whisper for caption generation, and a Python-based engine to search and arrange video clips.

Key technologies include natural language processing, text-to-speech synthesis, and video processing algorithms. The system is built with a user-friendly Streamlit interface, ensuring complete automation while allowing users to customize the process at any stage without limitations.

**Keywords:** Content creation, video generation, automation, ChatGPT, Streamlit

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