

Developing a software for dubbing of videos from English to other Indian regional languages

A PROJECT REPORT

Submitted by,

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Under the guidance of,

Dr.M Swapna

in partial fulfillment for the award of the degree of

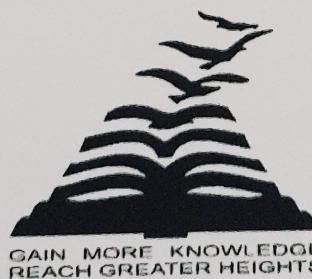
BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

(BIG DATA)

At



PRESIDENCY UNIVERSITY

BENGALURU

May 2025

PRESIDENCY UNIVERSITY

PRESIDENCY SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report "**Developing a software for dubbing of videos from English to other Indian regional languages**" being submitted by "Gagan Raam S, Udaya T K, Venkata Sreevathsa G, Anish R Gowda" bearing roll number(s) "20211CBD0042, 20211CBD0044, 20211CBD0049, 20211CBD0045" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Technology is a bonafide work carried out under my supervision.

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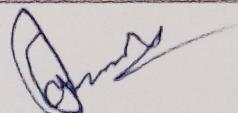
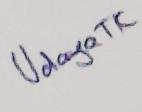
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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled "**Developing a software for dubbing of videos from English to other Indian regional languages**" in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. M Swapna, Asso. Prof, School of Computer Science Engineering, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

With the rise in consumption of digital content in India, regional language access is increasingly in demand, particularly in multimedia content. This project involves the creation of an AI-based software system capable of dubbing English videos into Indian regional languages such as Kannada, Hindi, Tamil, Telugu, and Malayalam. The aim is to automate the dubbing process by leveraging advanced technologies like Automatic Speech Recognition (ASR), Neural Machine Translation (NMT), and Text-to-Speech (TTS) synthesis to cut down time, expense, and human effort otherwise taken in localizing videos.

The process starts with extracting audio from the video, which is then transcribed through ASR. Transcribed English text is translated into a target regional language through a fine-tuned NMT model. Translated text is synthesized into speech through TTS, resulting in natural-sounding voiceovers. Timestamping and video processing make sure that subtitles and dubbed audio stay synchronized with the original video, keeping lip-sync integrity and ensuring a smooth viewing experience.

Apart from technical correctness, the system is focused on linguistic and cultural sensitivity by including region-based idioms and dialectical flavor. This adds to the applicability and influence of the content localized for a variety of audience groups.

Our software offers an easy-to-use interface where customers can upload videos or copy YouTube URLs, choose preferred languages, and get completely dubbed outputs with downloadable subtitles. The outcomes show high precision in speech synthesis and translation, providing a scalable and efficient solution for multilingual media content.

This project has huge scope for use in education, entertainment, and online media, and it plays a major role in enhancing content access for India's multilingual society. Enhancements in the future can be further languages supported, real-time dubbing, and emotion-based voice synthesis to give an even richer media experience.

ACKNOWLEDGEMENT

First of all, we are indebted to the **GOD ALMIGHTY** for giving me an opportunity to excel in our efforts to complete this project on time.

We express our sincere thanks to our respected dean **Dr. Md. Sameeruddin Khan**, Pro-VC, School of Engineering and Dean, School of Computer Science Engineering & Engineering & Presidency School of Information Science, Presidency University for getting us permission to undergo the project.

We express our heartfelt gratitude to our beloved Associate Deans **Dr. Mydhili Nair**, School of Computer Science and Engineering, Presidency University, and “**Dr. S Pravinthraja**”, Head of the Department, Presidency School of Computer Science and Engineering, Presidency University, for rendering timely help in completing this project successfully.

We are greatly indebted to our guide **Dr. M Swapna** and Reviewer **Dr. Sandeep Albert Mathias**, Presidency School of Computer Science and Engineering, Presidency University for their inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

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We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

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