

PROTOTYPE OF THE PROJECT IDEA __ Enhancing Online Learning with innovative Pedagogy

PROTOTYPE OF THE PROJECT __ **Enhancing Online Learning with innovative Pedagogy”**

By: -

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Theme: - Open Innovation

Abstract: -- In the current era of this technology boom the need is to develop the availability of different services online and education is not an exclusion to it. Considering this point as a major concern we are here to present the prototype of our project “**Enhancing Online Learning with innovative Pedagogy**”. The objective of the current project is to reach to the people who have limited resources of Internet and other related properties but who want to learn and enhance their skills. In this way the current project idea is proposed here to fulfill the “**RIGHT TO EDUCATION**” Law up to an extent which if provided by your esteemed organization would lead to a vast coverage of the students of rural background.

In this project we would take a video lecture and convert it into an audio clipping to be audible through the different ways available in the rural background at low cost including the **Spotify** or any other radio channel. Also, the txt file of the given lecture would be provided to the registered id of the customer / student for better understanding of the lecture.

Objective of the proposed Idea - The objective of the proposed project is to make or select the online lectures of faculties or any other school / College to be available as an audio lecture, one which could be telecast onto a specific frequency of the radio/ Spotify channel which could increase its accessibility even to the rural background areas.

The major objective of this proposal is to make the lectures available even in the areas of network problem. To full fill this aim we need to provide the audio version of the lecture onto the specific channel of Spotify or any other radio App.

This project also aims to provide the feature of generating caption file of the lecture and provide it to the registered id of the receiver so that the person can access it for his or her conceptual understanding of the topic.

Implementation Details: - In the present proposal the need is to first of all capture and collect the video lecture which will be our target lectures. For acquiring /collecting these lectures onto a single platform we will design a web portal which would be hosted on Azure. For this we could utilize the different storage services or containers available by Azure. After getting the specific video lecture our aim would be to get a text transcript of the lecture utilizing the feature of speech recognition feature of AI.

For this we will utilize the Azure features of Artificial Intelligence where we can create any application for the solution of our problem. Our Next step would be to add this transcript onto the specific Azure platform. From this we need to convert into the audio clippings which could be transferred to the specific channel of the radio / Spotify App.

Now again there is a need to collect these clippings in an organized manner for which we can utilize the available database of Azure like DB Cosmos. After that we could manage to provide these clippings onto a specific channel of the radio or Spotify App.

Here the role of different organization can come forward and allow the audio clippings of their college

/ School lectures to be delivered to their registered candidates / Students.

Here the entire task of the conversion would be done onto azure platform and the delivery could be provided to the specific radio channel which could be financed by the different educational

organization. This idea could be beneficial for the educational Institutions too as they would get recognition through their audio lectures being broadcasted onto the different channel of the radio.

In this way this idea could lead to empowerment to the education along with the identification of a specific teaching organization who could make their students learn by just the clipping of their audio lecture.

In this entire workflow we will utilize the Azure services for the below mentioned services

1. For capturing the recorded lectures of the class and storing them in an organized manner.
2. For creating the text transcript of the lecture provided to us and making it ready for converting them in a specific audio clipping.
3. For utilizing the different AI and Machine learning features for converting these transcripts into a specific audio clipping ready to be delivered.
4. For storing these clippings to be transferred into a specific radio / Spotify channel provided to us.
5. For keeping pace of the registered students / candidates to whom we need to provide the text transcript of the lecture being delivered.

The complete work flow of the project idea is explained through the flow chart below:

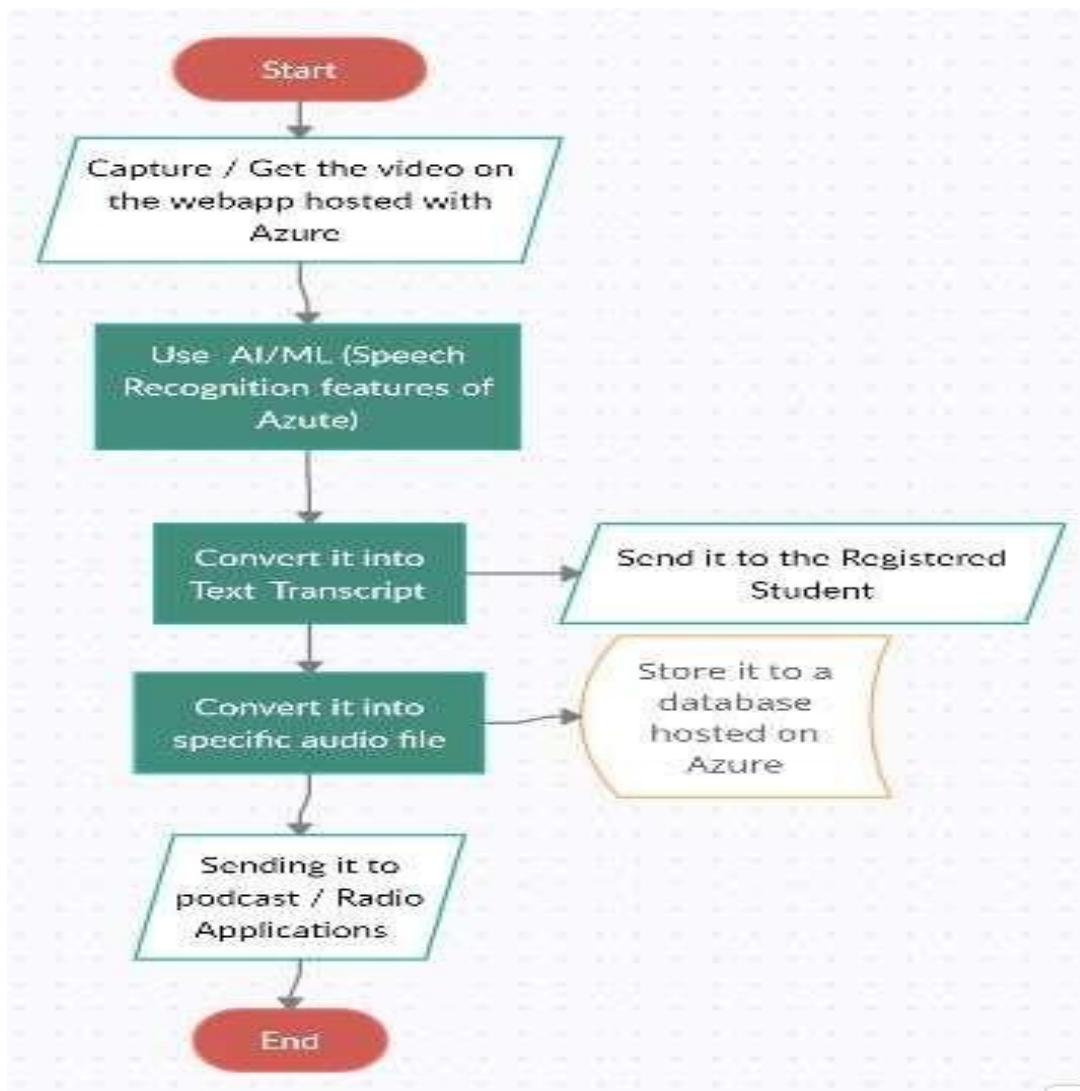


Fig 1. Work Flow of the Project Idea

Here, the role of the specific organizations comes into picture. The different organizations here come forward for the welfare of the students and provide their lectures to be converted into text transcript which could be delivered to their registered students along with the audio clippings of their lectures so that the more and more students can avail this facility and get educated.

Requirement Specification: -

In case of considering the requirement of Hardware and Software for the mentioned project, this project idea includes the below mentioned requirements which could be facilitated onto the google cloud so that the accessibility of the lecture content and it's audio would be available to a large extent which is the first and foremost objective of the current prototype.

The below mentioned requirements here only lists the minimum requirement of the project which could be further provided onto Google platform. Thus, these requirements indirectly list out the usage of Google Platform for running the entire Project.

Hardware requirements of running the project successfully

1. Processor (CPU)
2. Intel Core i7 (ninth generation)
3. Operating System
4. Microsoft Windows 10 Professional x64
5. Memory: - 8 GB RAM
6. Storage: 500 GB internal storage drive
7. Monitor/Display:
8. 14" LCD monitor, resolution of 1600 x 900 or better.
9. Network Adapter:- 2.11ac 2.4/5 GHz wireless adapter
10. Graphic card : - GTX 1660ti_ 6 GB

Software requirements of running the project successfully

1. Python v3 and above installed and a python compiler.

Microsoft platform onto which we can upload and access the current project data and allow its accessibility to its users for attaining knowledge.

Applications: -

1. It will help the students to learn from audio.
2. It will help the students of remote areas to study even with low internet speed.
3. Run with any hardware configuration.
4. Works as broadcasting service.
5. Provides links to video lectures and lectures documents along with the audio broadcast feature.
6. Lessons will also be available in Hindi with the usage of translate feature so that it could be understood by the student of even low level.

Conclusion: - Through this project we would be able to provide the lectures through online mode onto such a platform which could cover wide area and different level of students. This innovative approach would really be helpful for those who are living in rural background where the networking problems are common.

This initiative would really be helpful for those especially who wants to learn and study in their life but due to their uneven circumstances they are not capable to do so.

Thanks, and Regards

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