

**EPITOME: Let's Make It Easy**  
**A Major Project Synopsis Submitted to**



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## SYNOPSIS

### 1. TITLE

Epitome: Let's make it easy...

### 2. INTRODUCTION

Today we know that machines have become smarter than us and can help us with every aspect of life, the technologies have reached to an extent where they can do all the tasks of human beings like household tasks, controlling home devices, making appointments etc. The field which makes these things happen is Machine Learning. Machine Learning trains the machines with actual environmental data which makes it capable of acting when tested by the similar type of data. The machines have become capable of understanding human languages using Natural Language Processing. Today researches are being done in the field of text analytics.

As the project title suggests, Epitome is an application which will take offline and online class/meeting audio as an input, convert it into a text document and will summarize the whole discussion. Text summarization is the process of generating short, fluent, and most importantly accurate summary of a respectively longer text document. The main idea behind automatic text summarization is to be able to find a short subset of the most essential information from the entire set and present it in a human-readable format. As online textual data grows, automatic text summarization methods have potential to be very helpful because more useful information can be read in a short time.

Since the Covid-19 Pandemic, majorly all meetings, classes, lectures, seminars and all other forms of informative gathering has been done through online means. We all say the modern generation is the technological influenced one, but a large shift like this is also hard for them to swallow. Major reports have shown the attendees for the online gatherings are far less focused than the physical meeting attendees. Epitome is a catalyst that will allow user to become friendly with the environment by taking their burden off for creation of transcripts, notes and summary for the online meetings.

## **2.1 PROJECT BENEFITS**

- i) Stakeholders are not being required to create notes during meetings.
- ii) Participants can focus on the meeting.
- iii) Reducing human effort to create notes.
- iv) People need to learn much from texts. But they tend to want to spend less time while doing this.

## **2.2 PROJECT SCOPE**

The scopes of this project are:

- Performing Speech Recognition.
- Converting audio to text.
- Perform skimming i.e., text summarization.

## **3. PROBLEM STATEMENT**

Naturally, there is so much critical information being said via voice that gets lost once we leave the meeting or class room. No matter how hard we try to multitask, it's impossible to remember everything, type everything, and also stay present while the meeting is happening.

## **4. OBJECTIVES**

- i) Linking professionals and students to the new age technology.
- ii) To provide instant notes of offline and online meetings/classrooms.
- iii) Bringing more attention in meetings/classrooms.
- iv) We aim to provide a basic interface which can be used by anyone during online/offline meetings by providing them the summaries of the text from which they want to gain information.
- v) Save the time.

## 5. INTENDED USER

The intended users are the college going students, teachers and working professionals.

## 6. EXISTING SYSTEM

Currently there is no existing similar application in the market, but there are various different types of text summarizers available using different-different approaches to Machine Learning.

### 6.1 PROCESS FLOW

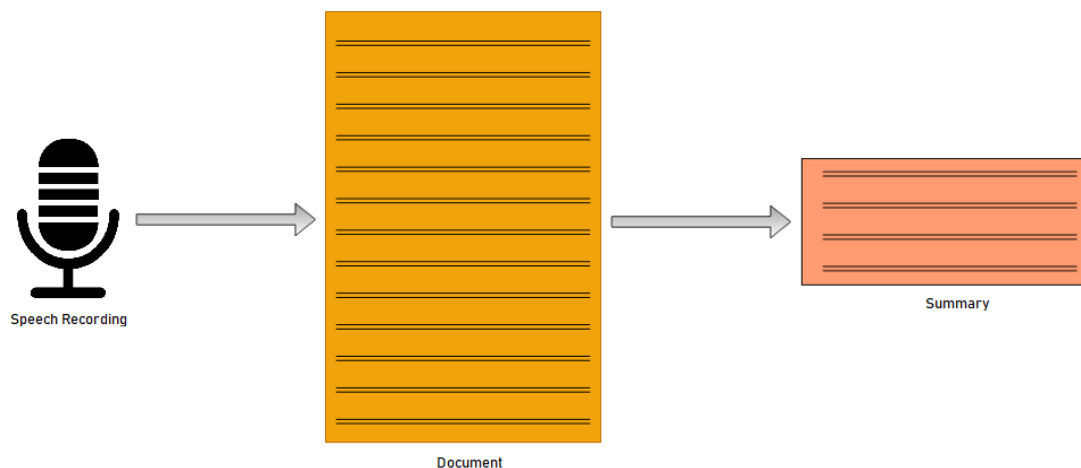


Figure 1: The basic procedure of working of Epitome

### 6.2 LIMITATIONS

1. Language Barrier- We have made our speech recognizer for english only.
2. Usage of only single language in speech i.e only English.

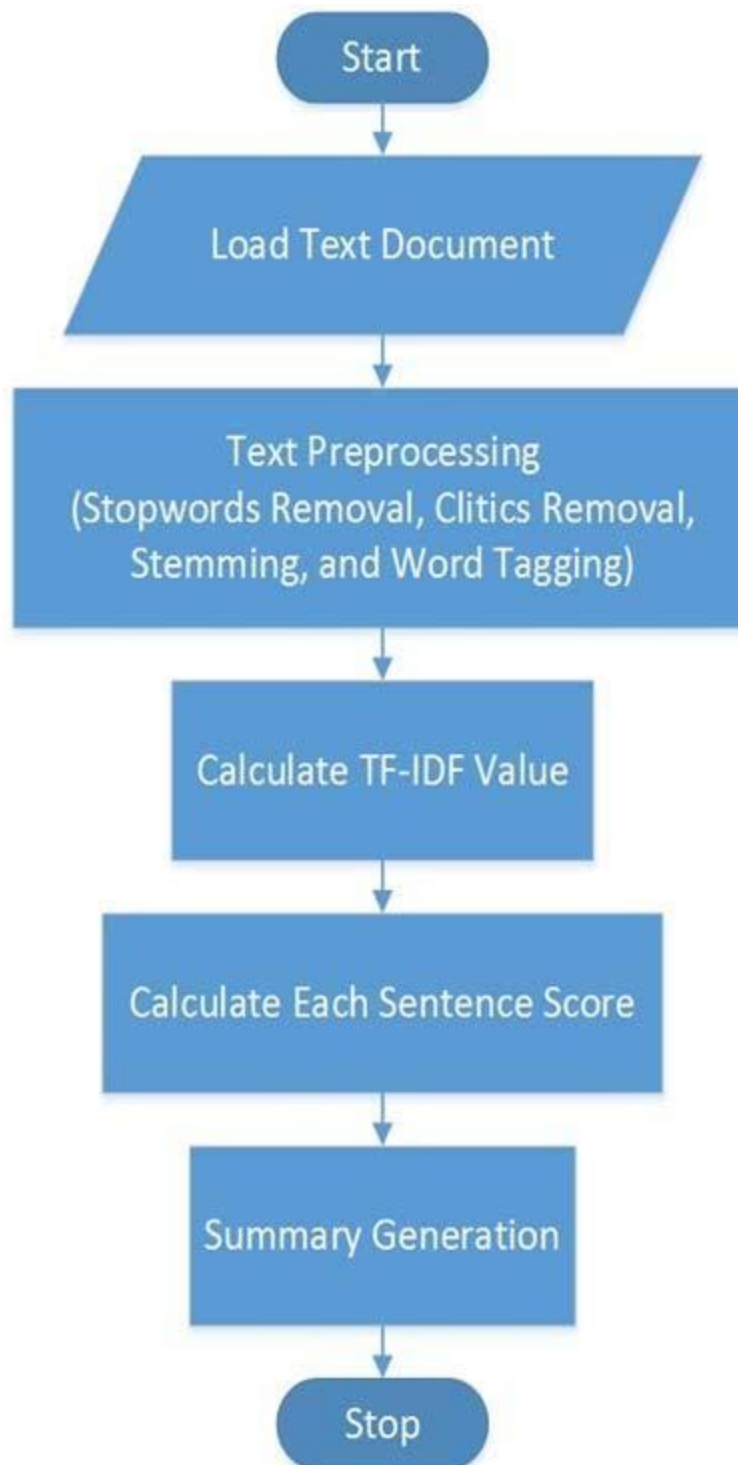
## 7. PROPOSED SYSTEM

1. Firstly the user has to switch on the voice recorder in the application.
2. Application will perform speech recognition and voice will be converted into the text.
3. Preprocessing of text is done, after preprocessing with concepts of Natural Language Processing, RNN and LSTM text skimming will be performed.
4. The words will be pre-ordered in priority queue and the frequency of word used in the transcript will also change the order in the priority queue.
5. Upper priority words, content will be skimmed along with sentence to editor recording the summary.
6. This will be done multiple times to avoid duplicity and regeneration of sentences.
7. The skimmed text will then be ordered and finally word substitution will be achieved giving the summary sentences to the actual ones to give a more reader understandable text summary.
8. The summary will be set to a pre-defined word size however it can further be changed with the input word count or user summary expectancy.

### 7.1 SYSTEM FEATURES

- (a) Capture, clarify and consolidate key ideas quickly and easily.
- (b) Retrieve your Notes wherever you go at the tap of a button.
- (c) Works online and offline
- (d) No character limit
- (e) No Ads

## 7.2 PROCESS FLOW



### **7.3 HARDWARE REQUIREMENT**

- i) A device with net connection

### **7.4 SOFTWARE REQUIREMENT**

- i) Anaconda/Google Colab
- ii) Visual Studio Code

## **8. EXPECTED OUTCOMES**

- i) Text Document of the audio given during the time of input.
- ii) Reliable and crisp summary of the class/meeting.

## **9. CONCLUSION**

The facts mentioned in the project reveal how Epitome can be used to fill major loopholes in online and offline meetings conducted globally. With the ever-growing text data, text summarization seems to have the potential for reducing the reading time by showing summaries of the text documents that capture the key points in the original documents. Despite the drawbacks, this system can be a major breakthrough in the digital, education and professional sector. Even in the worst conditions, with a few minor modifications, it will enable the optimization to reduce the obstacles that come its way. In short, Epitome is a step forward towards technology, innovation and hence overall growth.

### **9.1 LIMITATIONS**

1. Language Barrier - We have made our speech recognizer for english only.
2. Usage of only single language in speech i.e., only English.



## 9.2 FUTURE ENHANCEMENTS

- (a) Compatibility with multiple languages.
- (b) More simpler user Interface.
- (c) Keyword highlighting and web links.
- (d) Share notes with friends, classmates or colleagues any time.

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