**Artificial Intelligence Project Documentation**

# **Subtitle Generation Project**

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## **Section: ‘C’**

# Project Title:

Subtitle Generator.

# Project Type:

This is an NLP project.

# Domain:

Artificial Intelligence.

# Software/Tools:

* PyCharm
* VLC Media Player
* Notepad
* Audacity

# Language:

Python 3.7.

# Libraries/API’s:

* Speech Recognition library python
* Datetime
* OS
* [Google Web Speech API](https://w3c.github.io/speech-api/speechapi.html)

# Summery:

There is a branch in AI called Natural Language Processing which is used in all the functions and applications that contain some sort of language. NLP is mostly used in Speech Recognition Processes. The algorithms used in Speech recognition include PLP features, Viterbi search, deep neural networks, discrimination training, WFST framework, etc.

This is my small effort of making a video subtitles generator. I’m using some built-in python libraries for creating my project and using some google API.

There are seven methods to recognize speech from audio source using various API’s and these are:

* [Microsoft Bing Speech](https://azure.microsoft.com/en-us/services/cognitive-services/speech/)
* [Google Web Speech API](https://w3c.github.io/speech-api/speechapi.html)
* [Google Cloud Speech](https://cloud.google.com/speech/) - requires installation of the google-cloud-speech package
* [Houndify](https://www.houndify.com/) by Sound Hound
* [IBM Speech to Text](https://www.ibm.com/watson/services/speech-to-text/)
* [CMU Sphinx](https://cmusphinx.github.io/) - requires installing Pocket Sphinx
* [Wit.ai](https://wit.ai/)

I’m using Google Web Speech API and file handling to write the recognized speech on a notepad document in SRT form.

# Flow Diagram:

# Diagram Description automatically generated