# Audio Module
# Deployment Plan

VERSION 2.0

*DECEMBER 10, 2021*

# Revision History

| Date | Version | Description | Author |
|---|---|---|---|
| 12/01/2021 | draft | Setup document boilerplate | Maribel Gershman |
| 12/03/2021 | 1.0 | Speech-to-text adjustments | Abrahan Pedroza |
| 12/04/2021 | 2.0 | Acquisition and delivery of files adjusted | Nachiket Patel |

# Table of Contents

# Deployment Plan

## Introduction

This document delineates the goals, timeline and approach for implementing the project deliverables associated with the Audio Module as described in the CS4800 Software Engineering Spring 2021 course with adjustments made throughout the of the semester.

## Purpose

To provide off-line asynchronous audio analysis of an mp4 video file.

## Scope

The intended recipients within our class are the main Mobile Interview Application developers. More specifically the back-end Response Analysis Module/Team.

## Definitions, Acronyms, and Abbreviations

| | |
|---|---|
| SRS | Software Requirements Specification |
| MIA | Mobile Interview Application |
| AM | Audio Module |
| FEM | Front End Module |
| BEM | Back End Module |
| WSM | Web Services Module |
| GST | Google Speech to Text |
| API | Application Programming Interface |
| Google Cloud Storage | Cloud Service |
| Google Cloud Speech-to Text | Speech-to-text Application Programing Interface |
| Google Colab Environment | A product from Google Research. It allows anybody to write and execute arbitrary python code through the browser |
| FAQ | Frequently Asked Questions |

## 1.1    Overview

This document provides a summary of the deployment plan as an overview of the activities necessary to get the Audio Module installed and connected to other modules.

# References

The following specified items are contained within the CS4800_AUDIO_Module.zip file which can be obtained from the CS4800 Spring 4800 Department Library Software Repository under the Mobile Interview Application Division.

Software Requirements Specification ,Version 2.0, System Analysis Team, December 10, 2021

Technical Design Specifications ,Version 2.0, Development Team, December 10, 2021

Test Case Specification ,Version 2.0, Quality Assurance Team, December 10, 2021

Project Source Code, Version 2.0, Development Team, December 10, 2021

Project Build and Deployment ,Version 2.0, Audio Project Team Lead, December 10, 2021

Project Release Notes ,Version 2.0, Audio Project Team Lead, December 10, 2021

# Deployment Planning

This version of the Audio Module has the capability to connect to external modules. At the moment this capability has not been tested to connect with the Web Services Application. Test cases have been created for that capability in the future when it becomes available.

## Responsibilities

- The customer shall provide an accessible database and/or server for the video mp4 formatted file to reside on.

- The customer shall provide an accessible database and/or server for the transcription and scored file in json format to reside on.

- The accessible database and/or server for retrieval and delivery may be separate locations or may the same location.

- The customer shall provide access to cloud computing methods via the internet.

- The customer's acceptance of the test cases and process handling has not been defined at this point. All acceptance test cases and process handling have been delegated to the Audio Team's Quality Assurance group. Further testing by the customer shall be deferred to the next delivery cycle.

**Schedule**

Steps Needed To install and run the Audio Module

1. Install Packages by running all pip commands
    1.1. Restart runtime after all the packages have been installed
2. Run Block (1)
3. Authenticate User for Cloud Storage Service
4. Run Credential for Speech-to-cloud
    4.1. The Audio Module is read to be process audio files as a stand-alone or can be connected to other modules at this point.
5. Run MP4 to MP3 conversion
6. Run Long Audio File Transcription
    6.1. Running a Short Audio File transcription is possible
7. Run Confidence Grading Function
8. Run Save as JSON
9. Run Save Results to Google Cloud Storage

# Resources

Authenticated accounts on the following services and/or access granted to the following:

- An authenticated account on Google Cloud Services
    - Speech-to-text
    - Cloud-Storage
- Account or access to video file to be processed
- Account or access to the delivery database and/or server

**Facilities**

A stable internet connection.

Minimum of 500GB of free local memory space.

**Hardware**

Specialized hardware is not required since the module resides in the cloud.

**The Deployment Unit**

CS4800_AUDIO_Module.zip contains all the items listed as Support Documentation.

*Support Software*

Account on: Google Cloud Storage account

Account on: Google Speed-to-Text

Access to: Web Application Interface

Compiler for Python

*Support Documentation*

2_AUDIO_Software_Requirements_Specification.pdf

3_AUDIO_Technical_Design_Specifications.pdf

4_AUDIO_Test_Case_Specifications.pdf

5_AUDIO_Project_Source_Code.pdf

6_AUDIO_Project_Build_and_Deployment.pdf

7_AUDIO_Project_Release_Notes.pdf

*Support Personnel*

- Questions with respect to the optimization of the module
  - The System Analyst Team Lead will be available 16:00 UTC - 01:00 UTC at 1-800-1234-5678 ext. 11
- Questions related to the software build

- The Development Team Lead will be available 16:00 UTC - 01:00 UTC at 1-800-1234-5678 ext. 22
- Questions with respect to requirements and standards
  - The Quality Assurance Team Lead will be available 216:00 UTC - 01:00 UTC at 1-800-1234-5678 ext. 33

## Training

Training for the end users can be scheduled through the Customer Relations Department at 1-800-1234-5678 ext. 00