**PRESCRIPTION LABEL READING**

***Wireframe Document***

**Revision Number - 1.1**

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**Mary Ara N.**

**Document Control**

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| **Date** |  | **Version** | **Description** | **Author** |
| 12/22/2023 | 1.0 |  | First draft | Mary Ara N. |
| 01/01/2024 | 1.1 |  | Wireframe added | Mary Ara N. |

**1. Purpose of the wireframe document**

The wireframe document outlines the key functionalities, and interactions of the Prescription Label Reading text-to-speech project.

**2. Functional Modules**

**2.1 Image Processing Module:**

The process starts with uploading the label image.

A close up of a prescription

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It then uses Computer Vision to perform adaptive thresholding on the image for better visibility.

**2.2 Text Generation Module:**

The system uses Tesseract to convert the pre-processed image to text.

And then uses Regular Expressions to extract the relevant sentence text that is supposed to be read by the voice.

**2.3 Text-to-Speech (TTS) Module:**

Google Cloud’s texttospeech module is used here to build a voice, select the language, and convert the text to speech.

The output is a .MP3 file

**3. Local deployment**

A FastAPI app (main.py), running with uvicorn, takes care of this. It uses the UploadFile module, saves a temporary image of the input file from Postman to a temporary location for the extractor to use, and then outputs the resulting voice message to a local folder.

**4. Testing**

Follow these steps to run the app and create a voice message for any prescription label issued by Gateway Pharmacy, Edmonton, Alberta.

i. Run main.py,

A screenshot of a computer screen

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ii. Copy the resulting local host where uvicorn will be running and paste on the POST request address bar of Postman.

iii. Specify your form data and send the request.

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You will see the following logging messages when request is completed:

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iv. Go to the specified output folder to get the voice recording.

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A screenshot of a video player

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