**Text-To-Speech system Requirements Document**

**Purpose:**

The software produced from this project will be a text to speech synthesizer. The system will take a user inputted body of text and read it aloud back to the user.

**Intended audience:**

This software intended audience is anyone that required text to speech synthesis. People with impaired vision, one disorders that make it difficult for them to read. The software also features a more general use that anyone can benefit from.

**Intended Use:**

The intended use of this software is to speak aloud inputted text. This can be used to read paragraphs in documents or read back your own text to make sure that it reads correctly.

The software can also be used in system where information needs to read out for example a virtual assistant.

**Scope:**

The main goal of this software is to produce a product that can read text back to a user that is understandable to a high degree will a realistic sounding voice and sounds fluent.

**Functional Requirements**

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Requirement | Implemented | Tested |
| 1.0.1 | The System should be able to produce word sounds |  |  |
| 1.0.2 | The system should be able to produce these word sounds and piece them together into understandable sentences |  |  |
| 1.1.0 | The system should be able to take user input and process it |  |  |
| 1.1.1 | The User input should be processed into phonetic units that the speech synthesizer can understand |  |  |
| 1.1.2 | The user may be able to add different intonations to words |  |  |
| 1.1.3 | The user may be able to change the stress points in different words |  |  |
| 1.1.4 | The user may be able to change the style of speaking to ask a question or to make the synthesizer sound angry, sad or happy |  |  |
| 1.1.5 | The system shall output the text input to the user in a processed form to allow for reading along |  |  |

**Non-Functional requirements**

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Requirement | Implemented | Tested |
| 2.0.0 | The system should produce voice output in under 5 seconds from the user clicking the speak aloud button |  |  |
| 2.1.0 | The system should have a accessible User interface that is easy to understand |  |  |
| 2.2.0 | The system should output words that are easily understood by an English speaker |  |  |
| 2.3.0 | The system should always output speech for any inputted text |  |  |
| 2.4.0 | The system should be built in a way that is maintainable and can be adjusted with additional features added that improve functionality |  |  |
| 2.5.0 |  |  |  |