

Text 2 Txt
Specification Document
Decker Ayers
Spring 2023

Narrative:

A freshman student arrives at RIT/NTID for their first semester of college. Having come from residential schools and using ASL for most of the student's life, spoken/written language is different from what the student is accustomed to. The student passed all entrance exams with good scores, and took their first set of classes in both RIT and NTID classrooms. The student quickly comes to the realization that the English level expectations across the campus varies, and they have a hard time understanding anything above what they are accustomed to. The student reaches out for help from various resources across campus, through counselors, tutor centers, and writing prep departments.

Receiving help from these resources prove to be a timely effort, and impractical for a student with a full course load. The writing seminar offered through NTID is tumultuous and not as helpful for the student who is struggling right now. So the student turns down a different path, and downloads the Text 2 Txt accessibility application on their phone for free!

The application is designed to help the student filter any given text into a simpler format that is easier to understand at different reading levels. The app is also simple to use, no overly complex menus or hoops to jump through each time the user needs help. Input can be gathered from both pasting in text from the clipboard or taking a picture of the text through the app lens.

The student now has the tool they need to decipher the complexity of written text presented at higher level educational facilities. The student can pull out their phone/tablet and convert the text they have a hard time with into something more manageable. And after the student succeeds, the application thrives in the workplace too. A tool with great technology and features to make sure everyone can read the fine print.

Purpose:

This application is designed to service complex reading to simplified text needs. Often individuals are presented with text that is complex or hard to understand. This app is designed to allow users to take the hard-to-read text and feed it to an AI in order to return a simplified result.

Demographic:

The target audience of this application will be all individuals who have a difficult time understanding complex written language.

Technologies:

This application will leverage multiple technologies. It will require two APIs, one for Optical Character Recognition (OCR), and one for AI text simplification. The app will also need access to device cameras, clipboard, and connection-related information.

A local account page will be developed to constrain a testing pool before release. This will not need to exist as a part of the minimum viable product.

Platforms/Devices:

As a feature of MAUI, this application can be deployed across a number of different platforms. The target device platforms will be Android, iOS/iPadOS. The final application files will not be limited to other platforms if upon release it becomes necessary to include them. An Internet connection is required.

Cost:

There is no charge to the end user. There will be no advertisements or sponsors at this time due to restrictions with RIT/NTID project rules. There is a charge for the proposed APIs, after an immense amount of response calls. ChatGPT costs an estimated (\$0.002 / per 1000 tokens). Each 1000 tokens is about 750 English words.

Timeline:

The application will take until the end of this semester (2225), about 5 weeks from now. The objective is to reach students who need this sort of help by this summer's start. The research and design process will take about 1 week, with implementation taking the latter 4 weeks. There is no release date set for this project. The design and documentation process will be delivered April 3rd, and the MVP will be delivered April 28th. This leaves the span of a week for final adjustments before the end of the semester.

MVP:

The minimum viable product needs to contain each of the following:

- An appropriate UI that reflects the needs of RIT students
- Ability to convert an image to text
- Ability to paste complex text into the application from host device
- Release on Android, iOS, iPadOS