English to American Sign Language Translator Website

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**Project Description:**

**Problem:** Even with our contemporary technological advances, it is still quite difficult for someone who does not know sign language to communicate with a deaf individual who does. A simple Google search query result illustrates the issue perfectly. If one attempts to search for American sign language translators online the closest matching result to the query will be an English-to-ASL dictionary, because most sign language translating services aren’t really translators, rather are dictionaries. Effectively speaking, individuals trying to translate a statement or thought into ASL would have to search each word in the sentence individually and remember past gestures, when in reality it is possible to display numerous different words at once. Additionally, to make the problem even worse, many sites limit their searches per day for free users and require membership to receive the full user experience.

**Goal:** This project aims to provide a user the ability to submit English text and receive corresponding ASL videos pertaining to what he/she submitted. For words where no ASL video exists, corresponding hand gestures spelling out the word will be given. Accomplishing this will greatly ease the process of communicating or learning ASL much simpler for those who do not already know it -- and best of all free of charge for all users.

**System Requirements:**

**Functional Requirements:**

|  |  |  |
| --- | --- | --- |
| **Identifier** | **Priority** | **Requirement** |
| REQ1 | **5** | Site must translate the word to the appropriate corresponding version in ASL |
| REQ2 | **4** | If ASL video for word doesn’t exist, the spelling of the word will be given in ASL |
| REQ3 | **4** | Translation will be correct syntactically and semantically |
| REQ4 | **2** | Translation will be pragmatically correct |
| REQ5 | **2** | Site will be able to balance heavy user load |
| REQ6 | **3** | Should not take more than 20 seconds to display results for average user internet speeds submitting an average query |
| REQ7 | **4** | Site will look the same and function on all modern browser |
| REQ8 | **3** | Site will have a mobile-responsive version as well |

**Non-Functional Requirements:**

|  |  |  |
| --- | --- | --- |
| **Identifier** | **Priority** | **Requirement** |
| nREQ1 | **3** | Site will have a nice UI/UX |
| nREQ2 | **2** | Site will be hosted on Heroku (free for low traffic) |

**User Stories:**

|  |  |  |
| --- | --- | --- |
| **Identifier** | **User Story** | **Size** |
| **ST-01** | The site really saves me time when trying to talk to my deaf cousin | **4** |
| **ST-02** | Site gets the job done in a nice, fast, and free manner | **2** |
| **ST-03** | As someone trying to learn ASL, the site helped me learn a lot! | **3** |
| **ST-04** | Site looks great and the videos were easy to replicate to my deaf co-worker | **3** |
| **ST-05** | As a deaf ASL speaker, I suggest people use this site to communicate with deaf people around our school and community | **4** |