CMPE 491 – Senior Project I

Project Proposal

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ParlerVue

ParlerVue is an assistive communication system designed to empower individuals with severe motor impairments, including ALS patients, who are unable to communicate verbally. By leveraging eye-tracking technology, the system monitors the user's gaze and allows them to type through a virtual keyboard interface. Integrated Large Language Models (LLMs) enhance typed expressions by refining and predicting meaningful sentences, resulting in more fluent and efficient communication.

Once the user completes their message, ParlerVue converts the generated text into audible speech using text-to-speech (TTS) technology, serving as a digital voice for the user. Combining hardware and AI-based software components, ParlerVue aims to provide an accessible, human-centered solution that increases independence, social interaction, and quality of life for individuals with severe communication limitations.

Project URL:

References

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