



REAL-TIME SOFTWARE ENGINEERING
(SECJ4423)

Group Reflection

Lecturer:

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Reflection

Description:

In this project, we developed a Real-Time Sign Language Translator system that utilizes glove sensors to detect sign language gestures called Vooicify. The system then translates these gestures into human-readable text or speech output, which is displayed on a mobile application. The project involved designing and implementing various components, including the gesture recognition module, translation service, user interface, and communication protocols for data transmission.

Feelings:

Initially, we felt excited and motivated to work on this Vooicify project with real-world impact, particularly in assisting individuals with hearing impairments. As the project progressed, I experienced moments of frustration when encountering technical challenges, such as optimizing gesture recognition accuracy or ensuring seamless communication between the glove sensors and the mobile application.

Evaluation:

Overall, We are satisfied with the progress and outcomes of the project. We successfully developed a functional prototype that demonstrates the core features of Vooicify. However, there are areas for improvement, such as enhancing the robustness and accuracy of gesture recognition algorithms and optimizing the performance of the translation service for real-time usage.

Analysis:

The project's success can be attributed to effective collaboration within the team, leveraging each member's expertise in areas such as signal processing, machine learning, and mobile application development. However, we encountered challenges in integrating the hardware components which are glove sensors with the software system, which required a deeper understanding of sensor data processing and communication protocols.

Conclusion:

In conclusion, Vooicify project has been a valuable learning experience, both technically and personally. It has deepened my understanding of concurrency design, signal processing techniques, and the importance of user-centered design principles in accessibility-focused applications. Despite facing challenges, Vooicify project has reinforced my passion for using technology to create positive social impact and improve the lives of others.

Action Plan:

Moving forward, we plan to address the identified areas for improvement actively. This includes conducting further research on advanced gesture recognition algorithms and machine learning techniques to enhance accuracy and robustness. Additionally, we will collaborate closely with domain experts and end-users to gather feedback and iterate on the user interface design, aiming for improved usability and accessibility. Furthermore, we aim to explore opportunities for integrating additional features, such as real-time translation of sign language into multiple spoken languages, to enhance the functionality and inclusivity of the system. To ensure the project's longevity and relevance, we will continuously update and maintain the codebase to keep it compatible with evolving technologies and standards in the field of accessibility and assistive technologies.