**Project idea**

This project will be a pair of glasses with eye-tracking capabilities similar to products like Google glasses. However, the focus of these glasses will be to provide people with disabilities that limit their ability to speak or move their body with a way to communicate. There are currently devices that can do this, but they can be expensive and require the user to be positioned in front of the eye-tracking camera for it to work. With these glasses, as long as the user has them on, they will be able to communicate using their eyes, which will let their caretakers know what they want and how to help them.

A big problem for people who can’t move their bodies the way they want is communication, it’s hard for the caretaker to know what a patient wants when they can’t talk to them. The glasses would have inbuilt eye tracking that would allow the user to navigate through an augmented reality interface that would include whatever they need. The patient would be able to use a keyboard to type what they want to say, which would then be played through speakers so their caretaker can hear it. Not only does that mean they can have a conversation, but if they’re in a room alone it could be connected to a speaker in a different room. That way if they need help it’s easy for them to call for it, either using the speakers or a phone connected to the glasses. The glasses would include a way to use other technology through them, like using their eyes as a mouse for a computer or changing the channel on the TV. This would give people in this condition more freedom to watch or listen to what they want, rather than what their caretaker has chosen. It could also be integrated with smart home technology, giving the ability to turn on lights or change the temperature all through the glasses. It would also include an alarm system that the user would be able to trigger with a configurable number of deliberate blinks, that would then contact their caretaker or in extreme cases, an ambulance.

The technology needed for the base version of these glasses is already around. Google glasses have already made augmented reality glasses that were voice and motion controlled, those combined with an eye tracker would give the user control over the glasses without needing to move or talk. It could be connected to a phone with Bluetooth to allow the user to make calls and send messages. The smart home technology that allows users to control various things around the house with a smartphone already exists, incorporating it into this device would allow the same control to the person wearing the glasses. Software would need to be created to allow the glasses to connect to any device that the user may benefit from, like Tv’s, computers, or tablets. As these technologies advance so will the capabilities of the glasses.

With these glasses people who previously had no way to communicate with others would be able to talk to people again, and much more on top of that. The ability to ask for help or tell others what they’re going through will benefit a lot of people and give caretakers all over the world a way to better assist their patients. It will also give disabled people a new way to interact with their environment, even if it is limited.