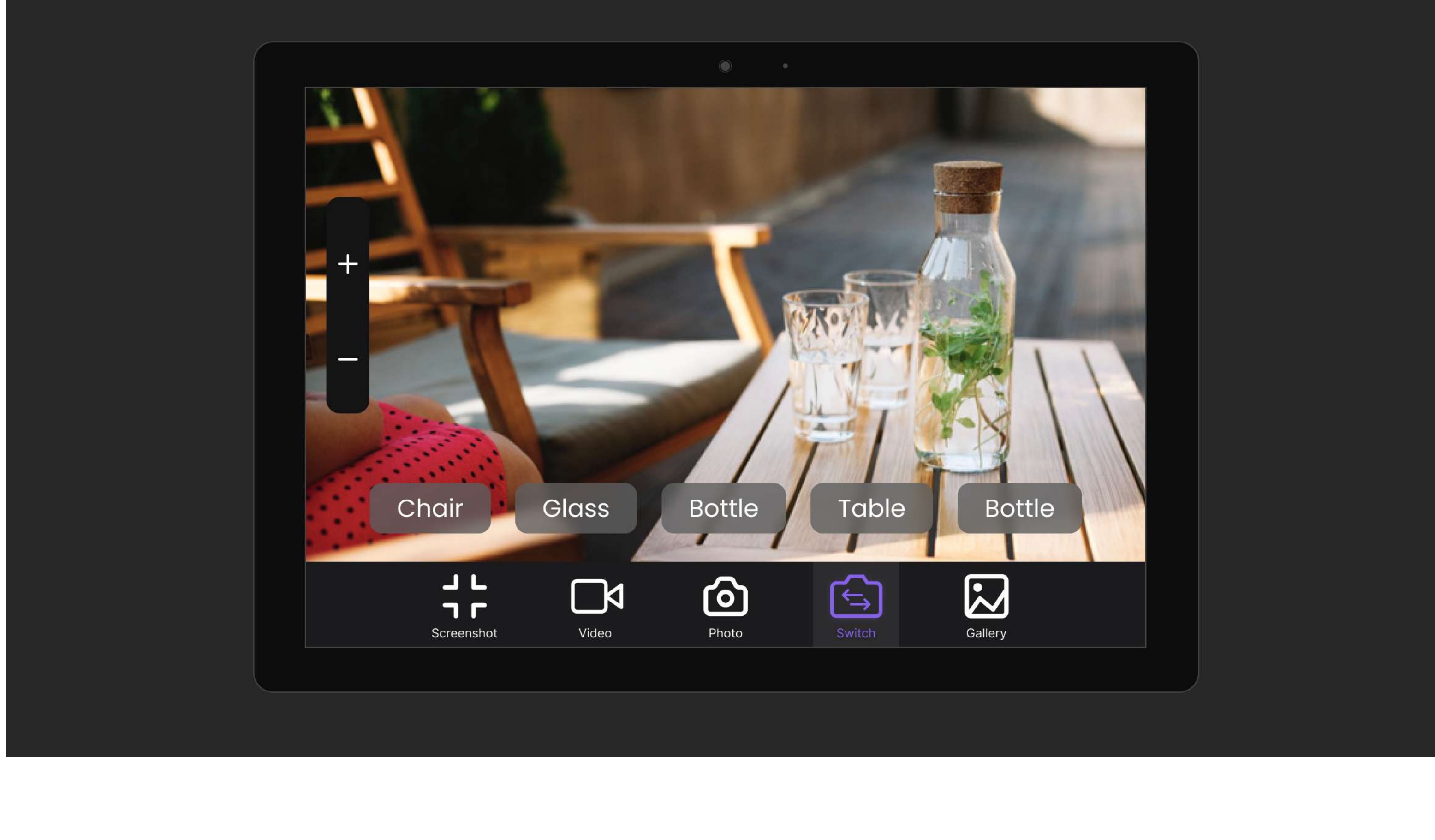


An Easy Way to Communicate for Disabled People

Lulu, United States 



About the client

Lulu is a gathering of forward-minded specialists based in the USA that has found themselves troubled with the way people with disabilities have to cope with living in modern realities.

The resulting Lulu project is an ambitious smart digital communication technology aimed at facilitating all the hardships of communication among disabled people. The team at Zade was undoubtedly pleased to be chosen as a technological partner for this one.

Services

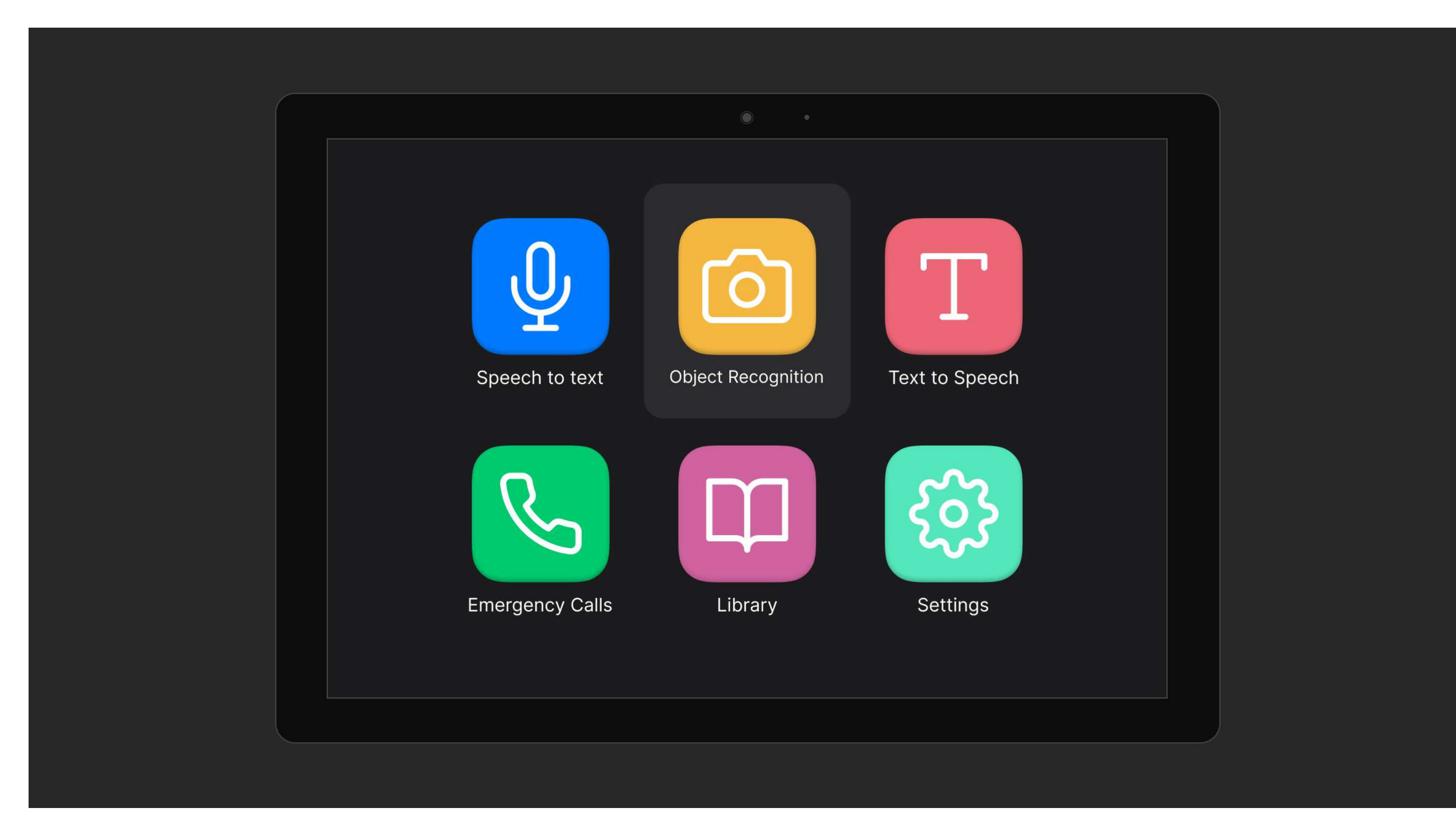
Electron Native App

Team

2 developers
2 UI/UX designers

Industry

Healthcare



Delivered solution

In terms of all the technical work, Lulu is a complex digital communication system based on a progressive API that allows us to seamlessly integrate with AI services and achieve the overall optimized, secure backend architecture. We have created a design that is not only consistent, convenient, eye-pleasing, and stylish - it translates brand attributes. It engages users to explore the possibilities via a range of features and customizable tools.

Ultimately, Lulu is a multipurpose tool that enables many conversation formats and styles and allows to collect and categorize preferred inputs and outputs. A specially trained AI network can recognize and scan up to 5-6 objects in front of the camera. Text inputs can be voiced by the system and vice versa - the input voice can be converted into text. For the quickest answers to various questions, the system recognizes an extensive database of key phrases and words.

On top of all that, the advanced digital communication system also offers a library of frequently used words and phrases for instant access, intuitive and customizable means of navigation (a specialized keyboard that can be manipulated either directly or via voice or visual commands, gestures), quick access panel, and an emergency button for unpredictable situations.

Technologies

Cloud technologies

Google Cloud Platform

Databases

Redis, PostgreSQL

APIs

DialogFlow NLP, Tensorflow Computer Vision

Principles

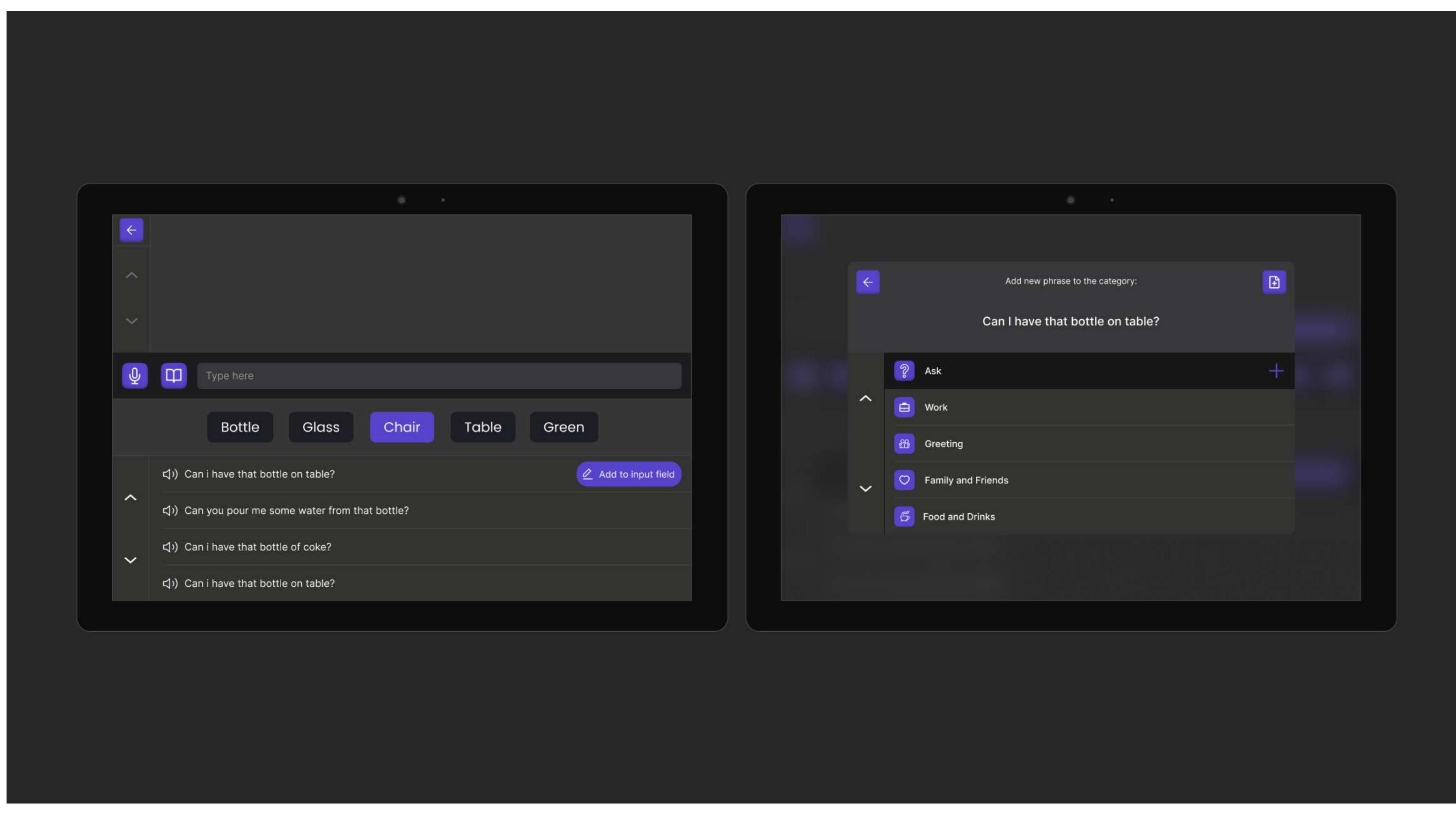
OOP and Solid

Project Management

Agile/Scrum

Tech Stack

Node.js, Electron.js, React.js, TypeScript



Challenges

➤ Inability to communicate

People with speech and communication disabilities, visual impairment and blindness, hearing problems and deafness, and cognitive and developmental disabilities lack efficient, universal digital communication systems.

➤ Poor image/sound recognition

It is either impossible, difficult, or problematic to communicate visually, by showing objects or gestures via existing available tools. While voice recognition works well in some solutions, image processing is prioritized in others.

➤ No universal way to communicate

There is a lack of available complex centralized digital communication platforms that pack enough helpful features in one place to help disabled people constantly stay in touch, easily communicate when studying or working, and find their way around emergencies at the same time.

Lulu solutions

✔ Specialized digital communication interface

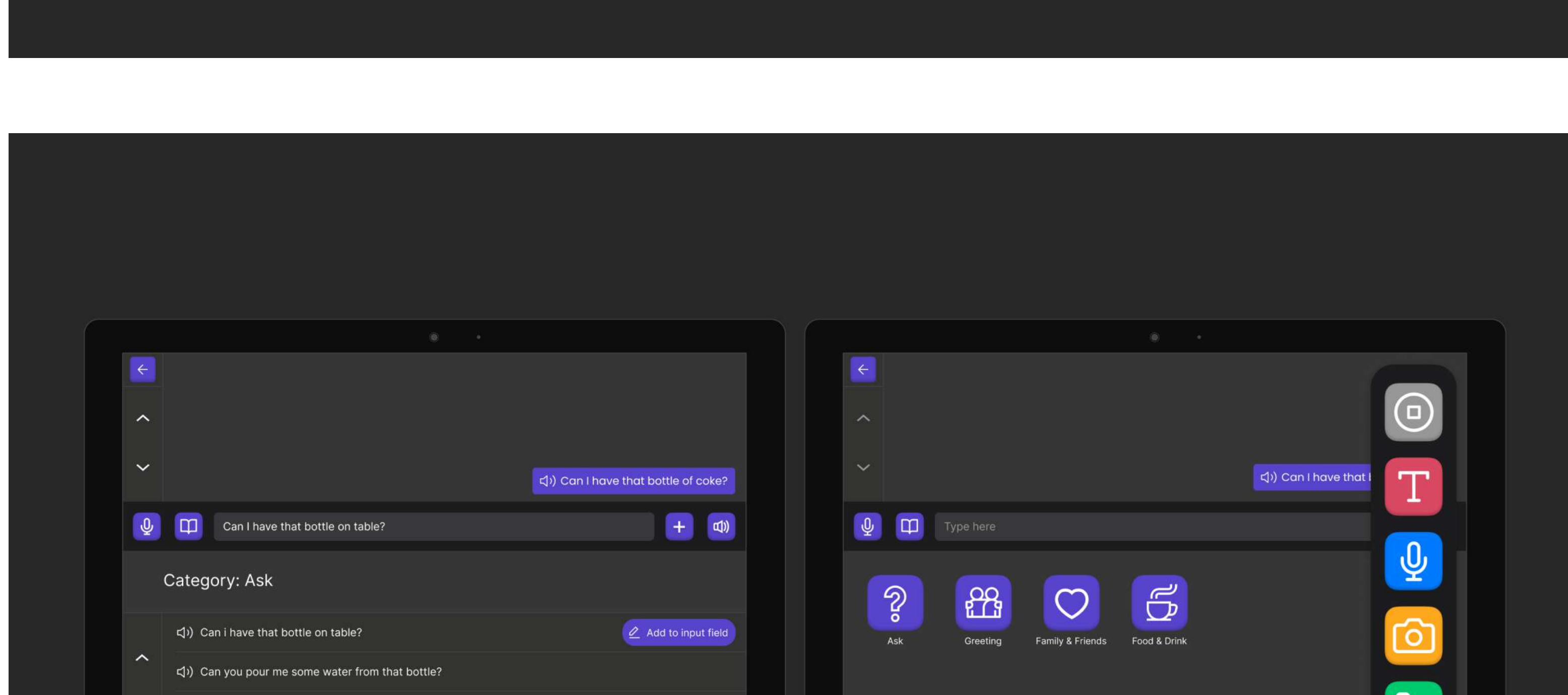
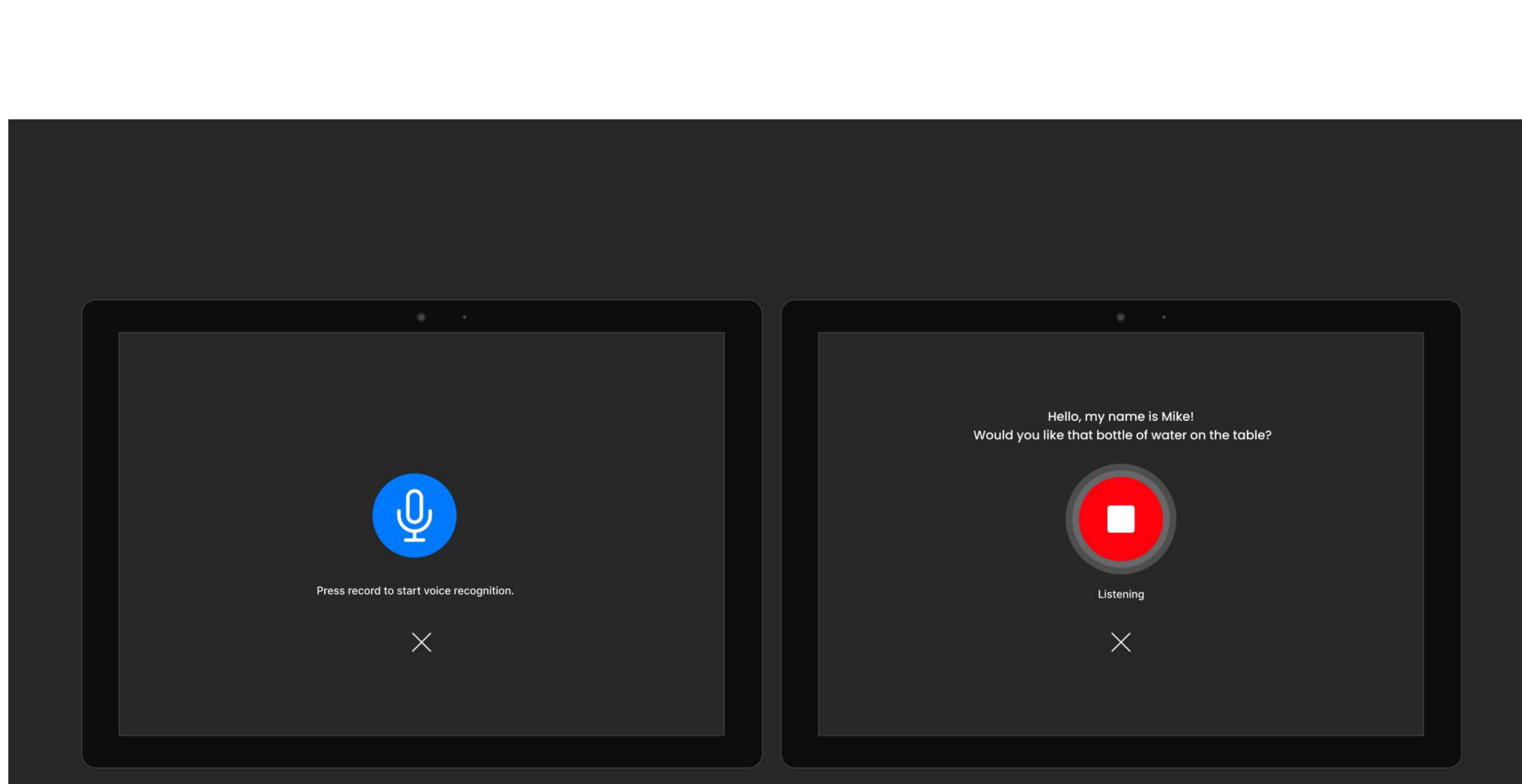
Lulu is an AI-powered platform that employs image and speech recognition technologies to enable efficient object recognition, instant text-to-speech and speech-to-text conversion, and speech analysis.

✔ Combined visual/audio recognition

The system easily recognizes up to 6 visual objects at the same time, does input text voiceovers and converts voice to text, makes out speech by keywords, and understands a range of gestures for interface management.

✔ Multipurpose convenience out of the box

Lulu is an all-around convenient solution that can help disabled people find the most fitting way to communicate for them individually within a single system. Commonly, the software is installed on the armchair-attached tablet for instant access.



Client about us

"Lulu is a passion-driven project that we could only entrust to an all-around reliable tech partner and, thankfully, the guys at Zade were perfect to collaborate with. Dedicated specialists quickly got the drift of our design ideas and implemented them with gloss. We are grateful for all the work done and are eager to promote Lulu among real users now."

Read more on [Clutch](#)

Johae Song, Co-founder & CEO, Lulu

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