



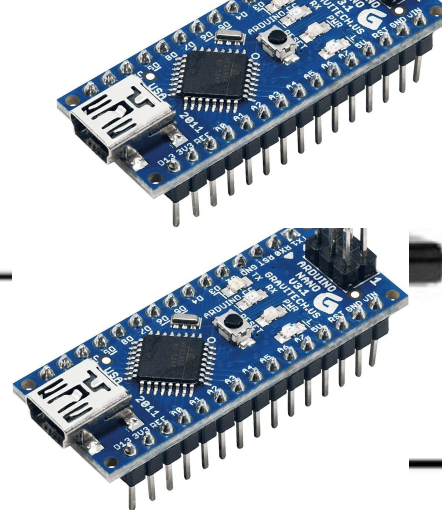
aslo.

A black and white photograph of two hands in sign language. The hands are positioned in the center-left of the frame, with fingers spread and palms facing each other. The background is a soft, out-of-focus grey. Overlaid on the left side of the image is the text '1 in 4' in a large, white, sans-serif font.

1 in 4

People use
sign
language
around the
world

Hearing-Impaired
Person

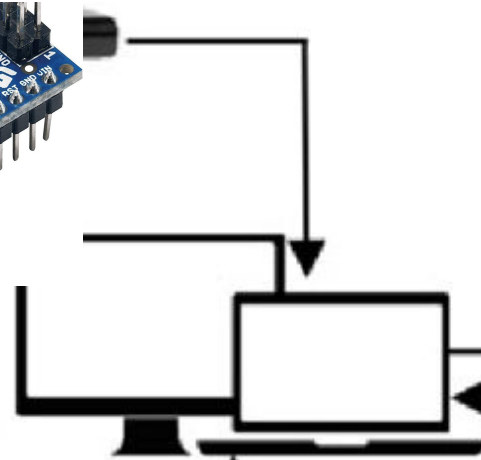


Normal Person



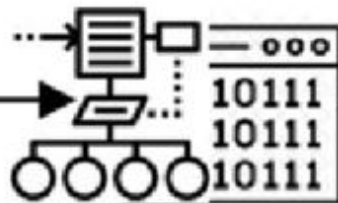
Record New
Gesture

Audio &
Text



Sign-Language
Translation Application

Database

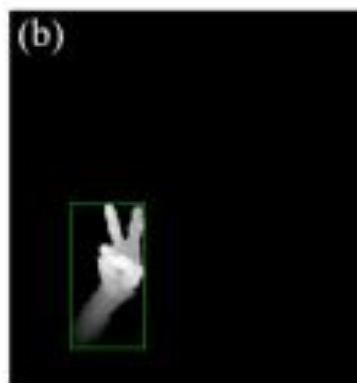


Dynamic Time
Wrapping Algorithm

Original depth image



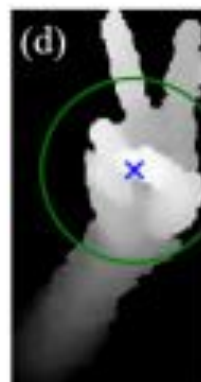
S1: Hand
detection



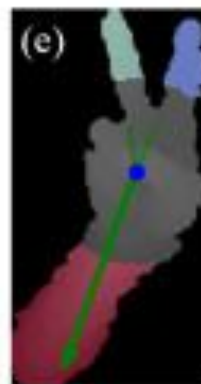
S2: Hand
cropping



S3: Palm region
approximation



S4: Arm region
segmentation



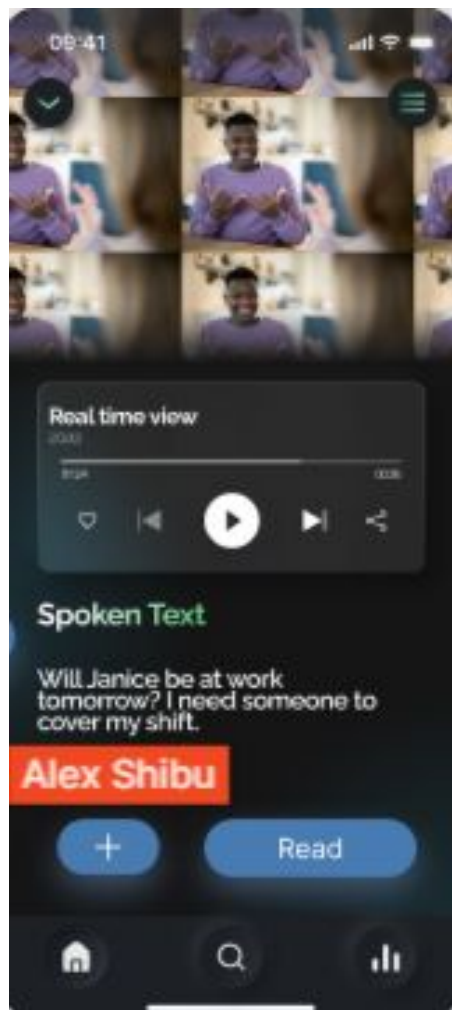
S5: Arm region
removal
S6: Direction
normalization

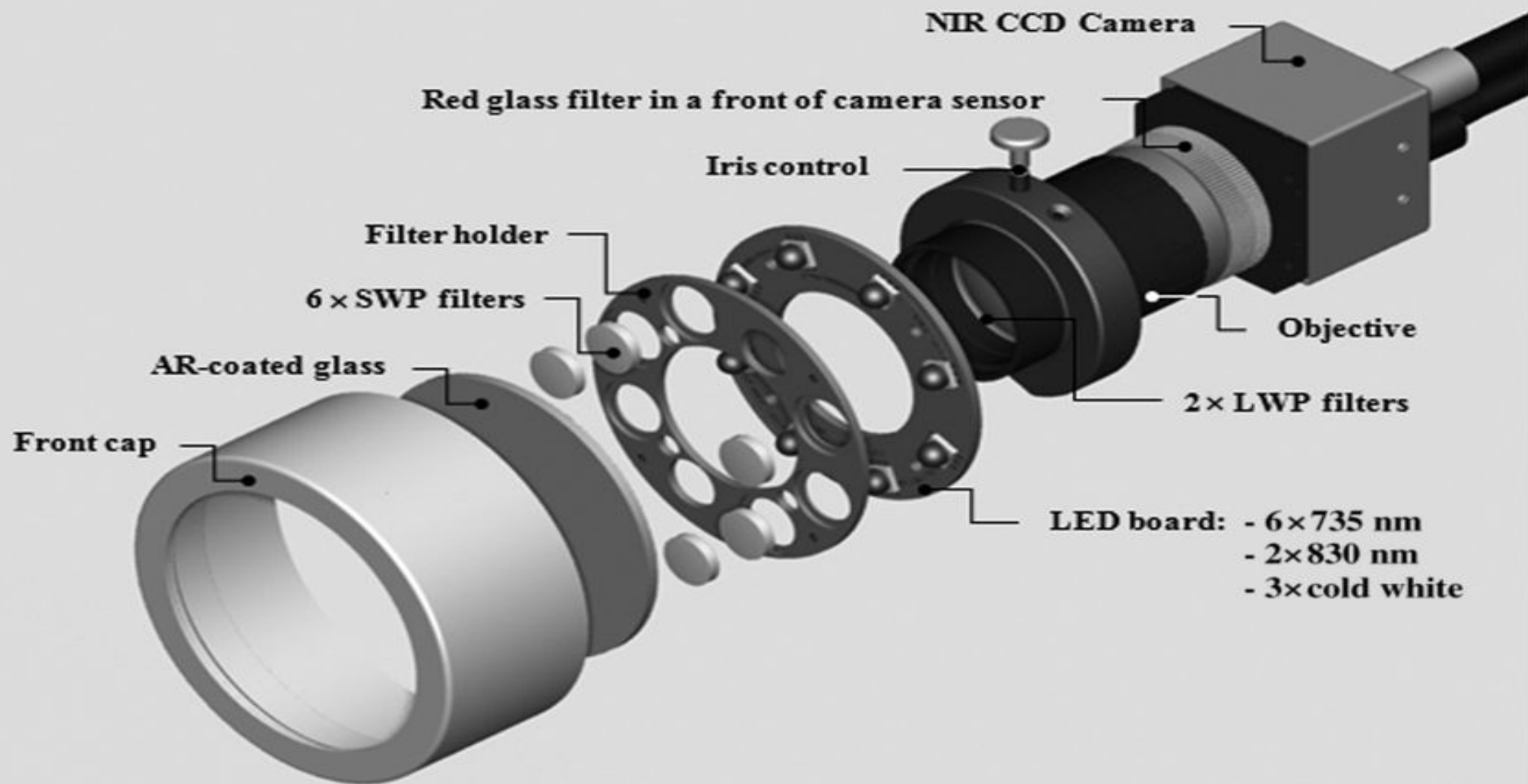


Preprocessed
depth image



Can be iterated for better segmentation





The Sign Language Analyses (SLAY) Database

A person wearing a green button-down shirt is shown from the chest up. Their hands are raised in front of them, with fingers spread, in a gesture that could mean 'stop' or 'five'. The background is a blurred indoor setting with a blue wall and a green plant.

A **better** future for
communication