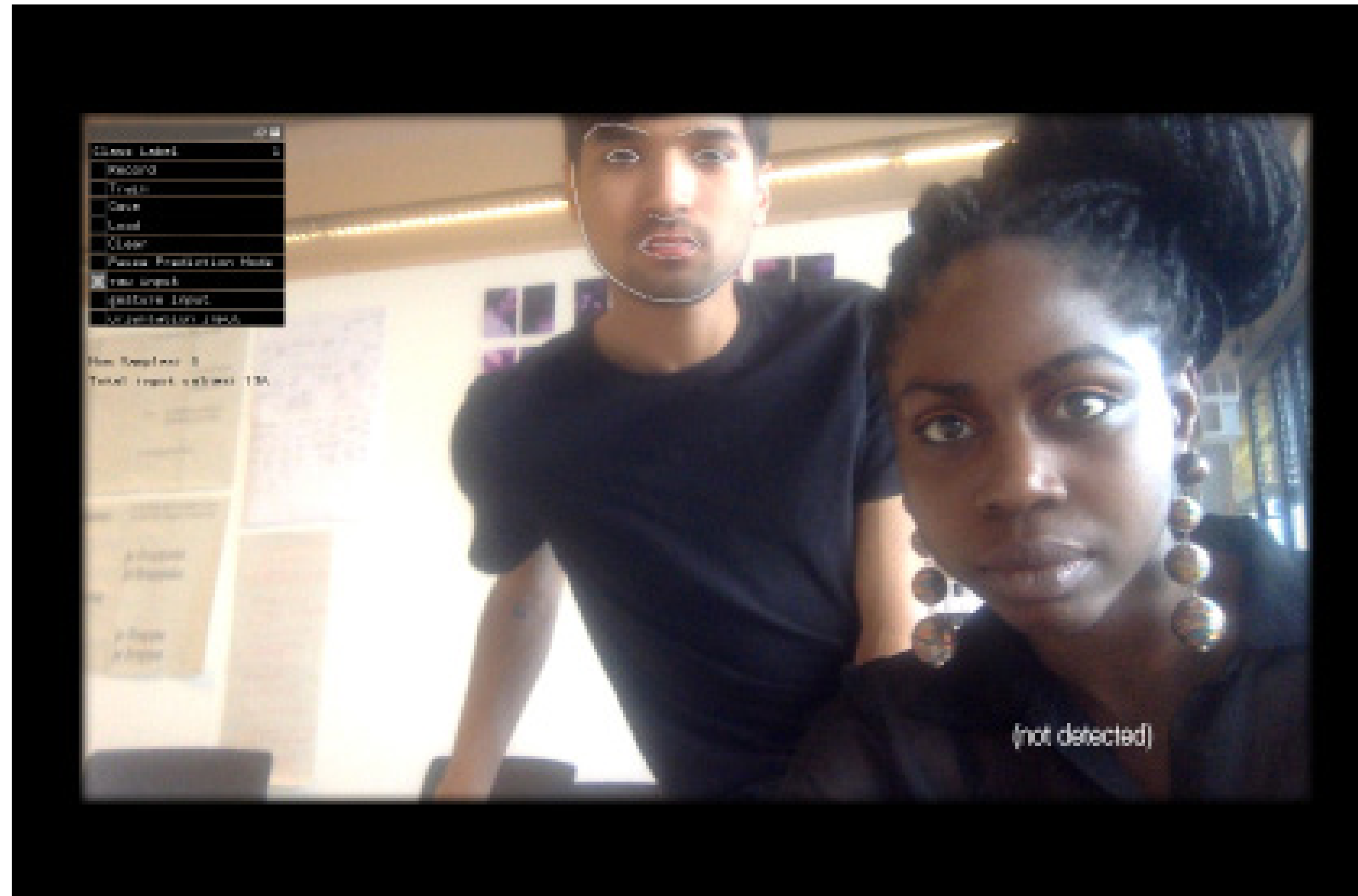# Diversity Actions: Imagine inclusive technologies

2021 — Iyo Bisseck

AI, can you see me? research around racial biases in AI. 2018—2020

Racial bias in recognition software algorithm

ML4a, Yolo Darknet, not recognizing my face

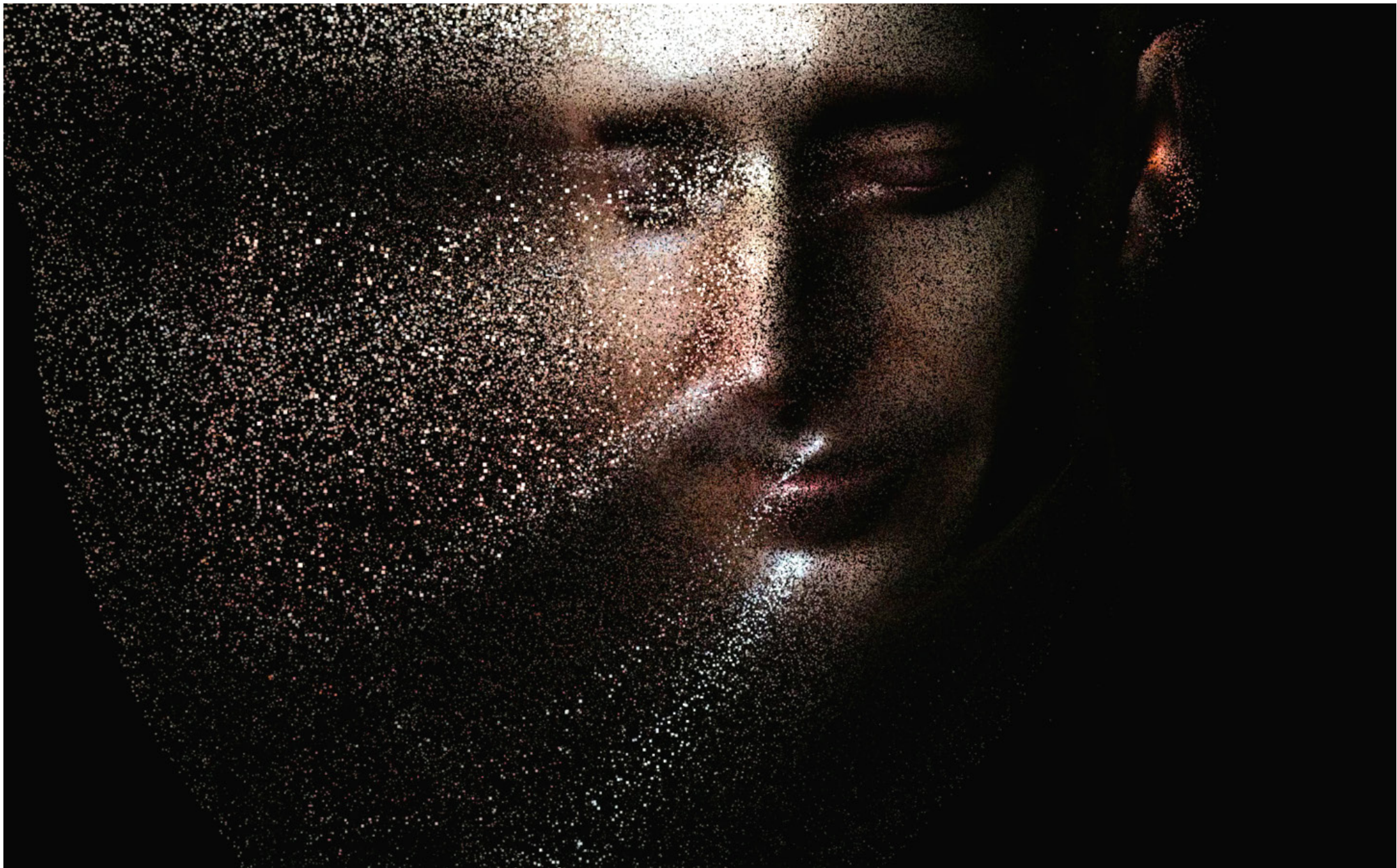# AI, can you see me?

The Human Detector, 2018

Menelique, 2020

Galerie Eeeeh during the Bureau
des questions importants, Nyon,
Switzerland, 2019
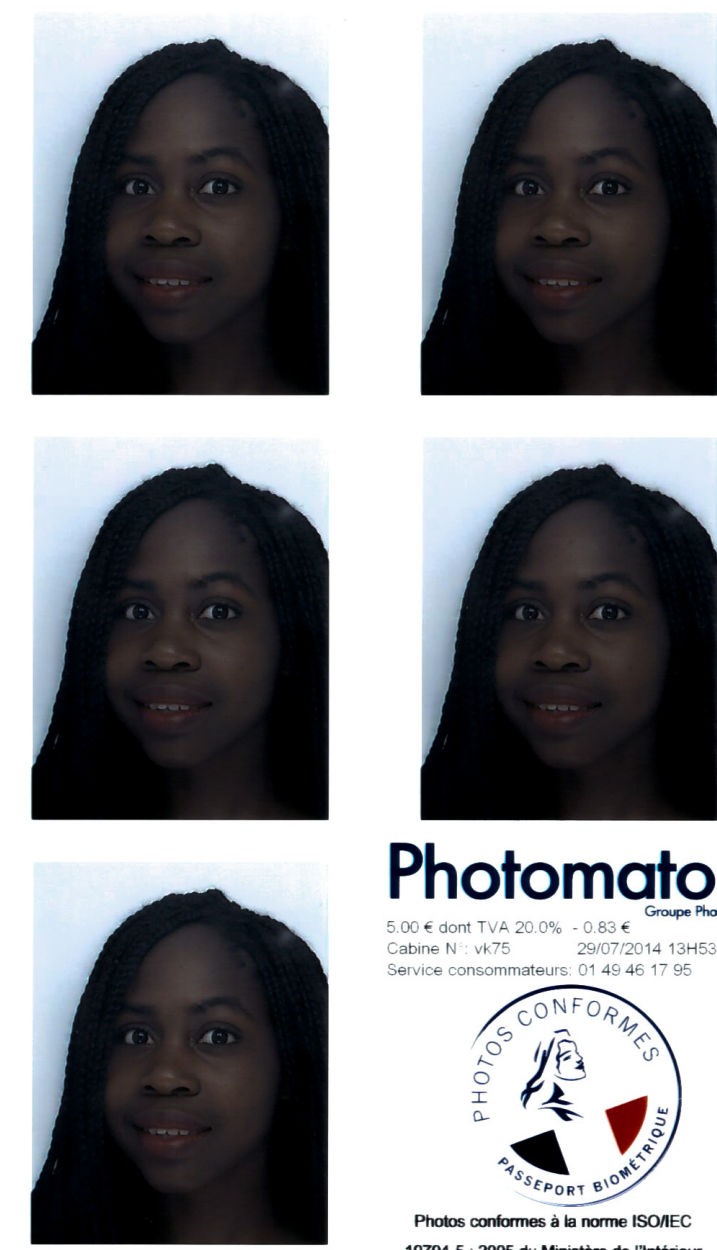
Examples in my everyday life

Faces. 2014. Interactive installation. Catherine Ikam, Louis Fléri.

Photomaton – «Photos conformes»

Training set

«I understood that having an inclusive training set allows you to have inclusive results. So I asked myself: Is there really a lack of diversity in training set data? If so, is this an unconscious choice on the part of developers or is it deliberate? What access do we have to diversity in data? And especially, how can we find out this information?»

Training set of faces to teach AI what is the face

Wuta, interactive installation, virtual LPC reader

2019

Teachable Machine using Machine Learning

Lot of very simple examples

ML5, Friendly Machine for the web

Image Regression using Feature Extraction with MobileNet. Built with p5.js
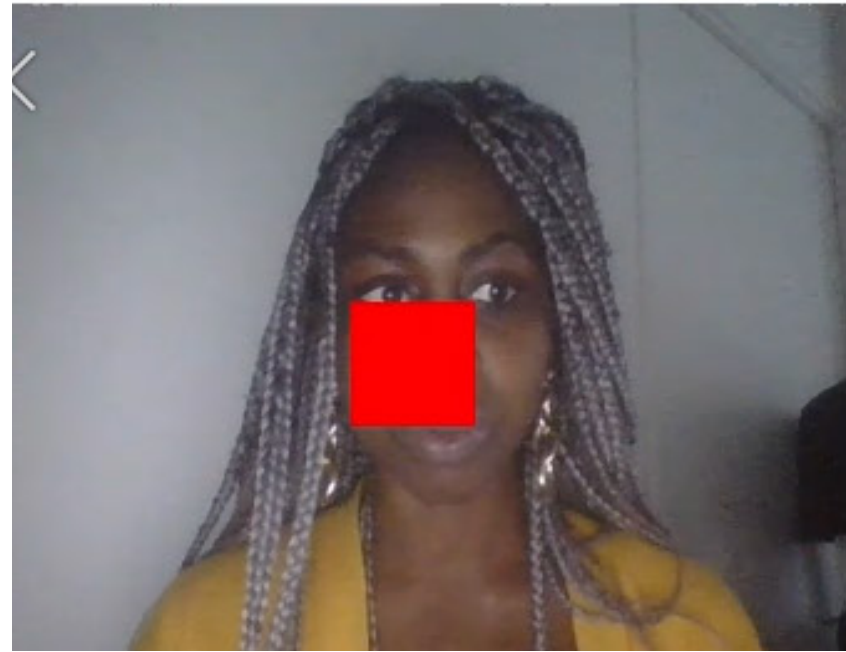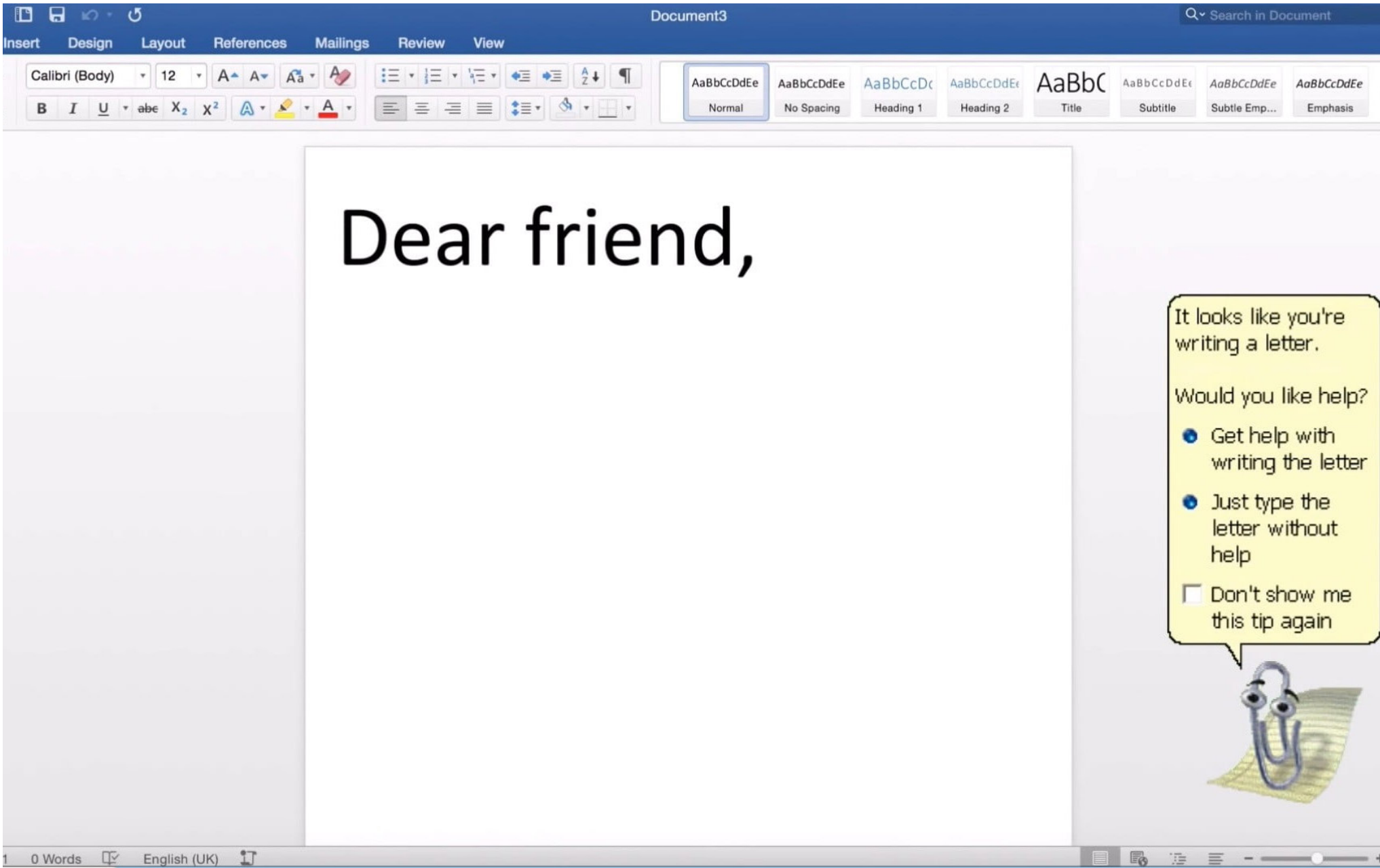

https://examples.ml5js.org/p5js/featureextractor/featureextractor_image_regression/

Try with lip reading

Clippy, my first virtual assistant on Word

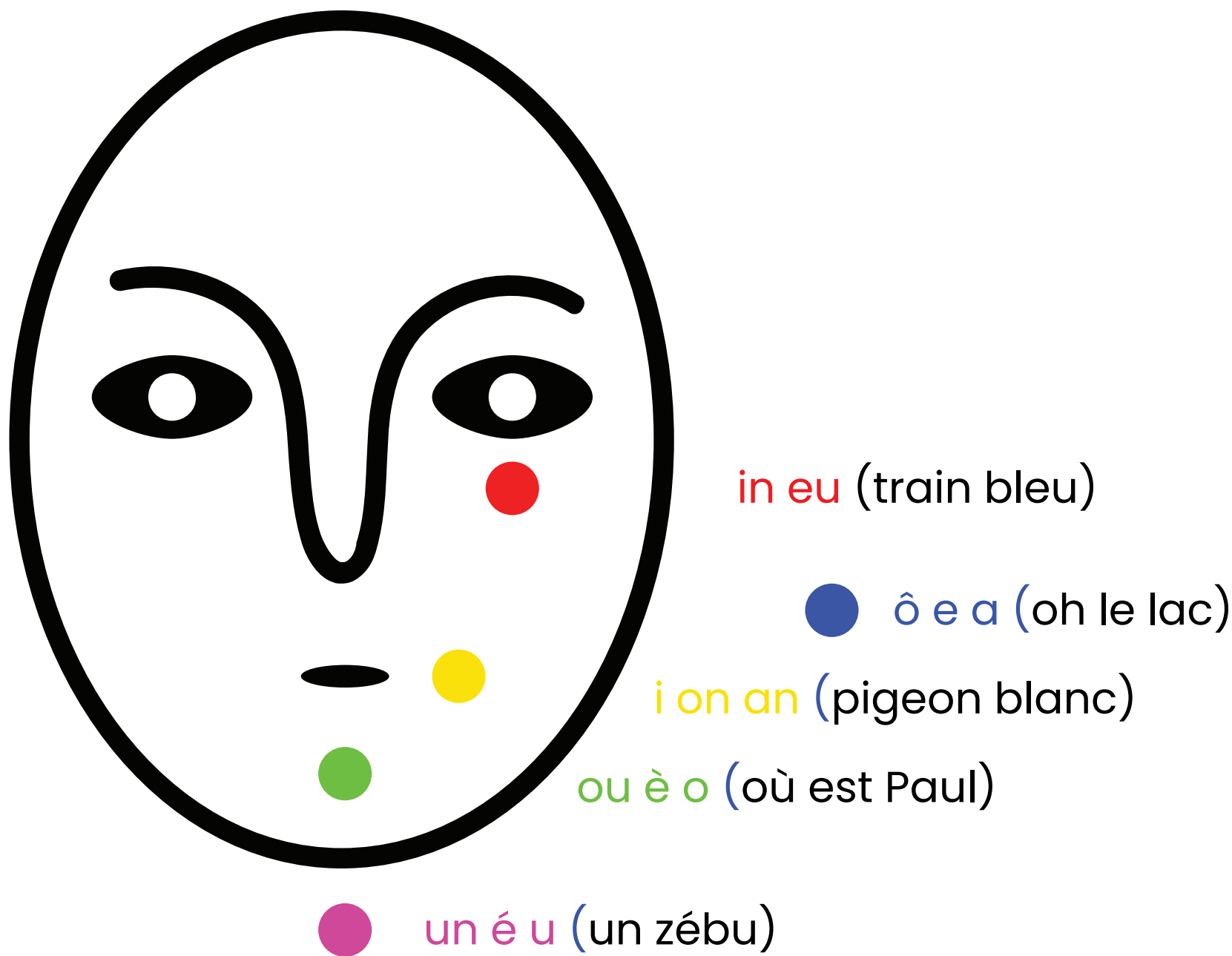Labial synonym

LPC, langue parlée complétée

Lecture labiale
Lip reading

Configuration
de la main
Hand
configuration

LPC

Position de la main
par rapport au visage
Position of the hand
in relation to the face

LPC, french Cued Speech
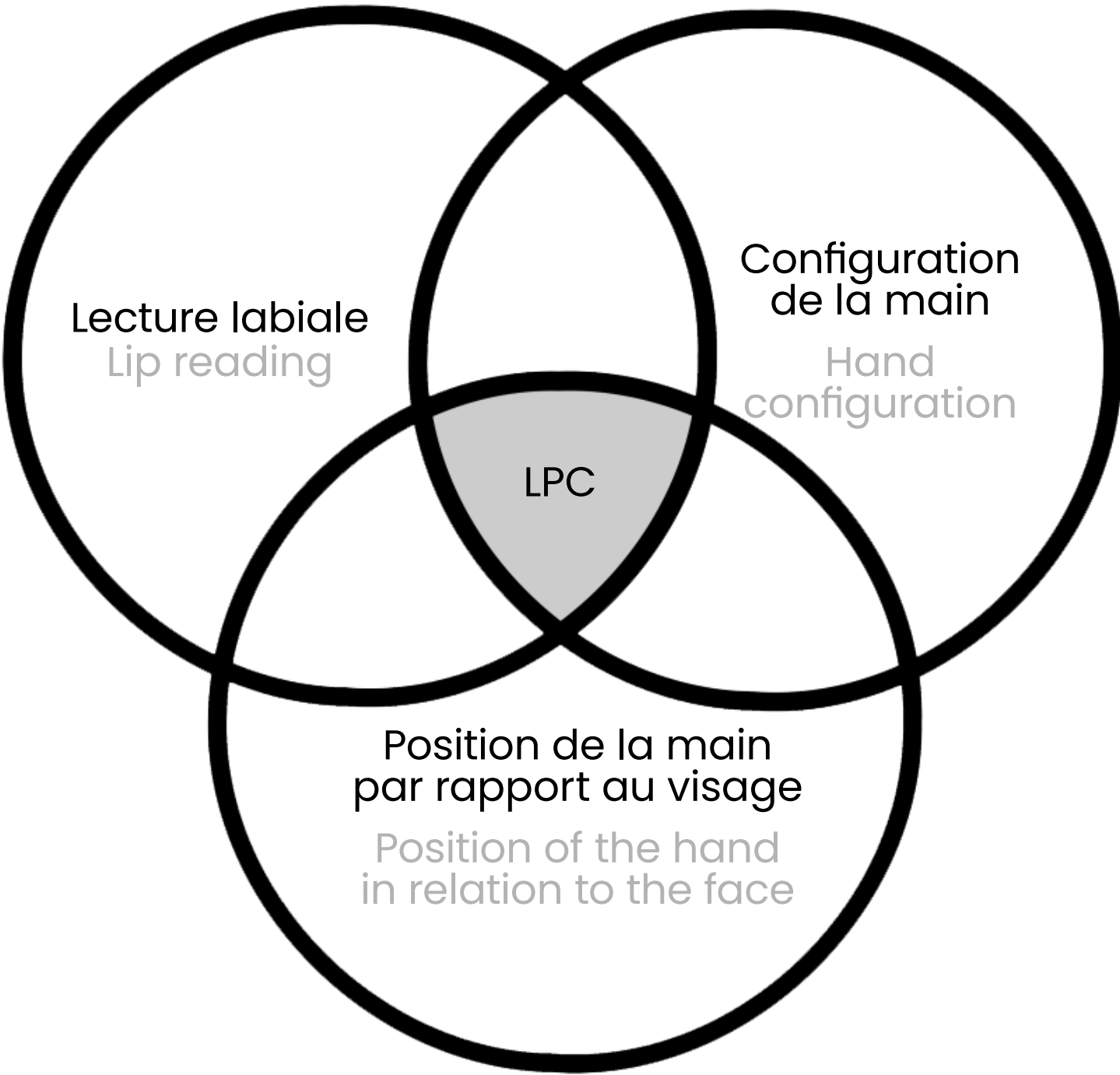
in France since 1977

adapted to the phonemes of the French
language

a step towards lip reading and literacy

LPC, langue parlée complétée

in eu (train bleu)

ô e a (oh le lac)

i on an (pigeon blanc)

ou è o (où est Paul)

un é u (un zébu)

Clés Voyelles
based on phonem (IPA)

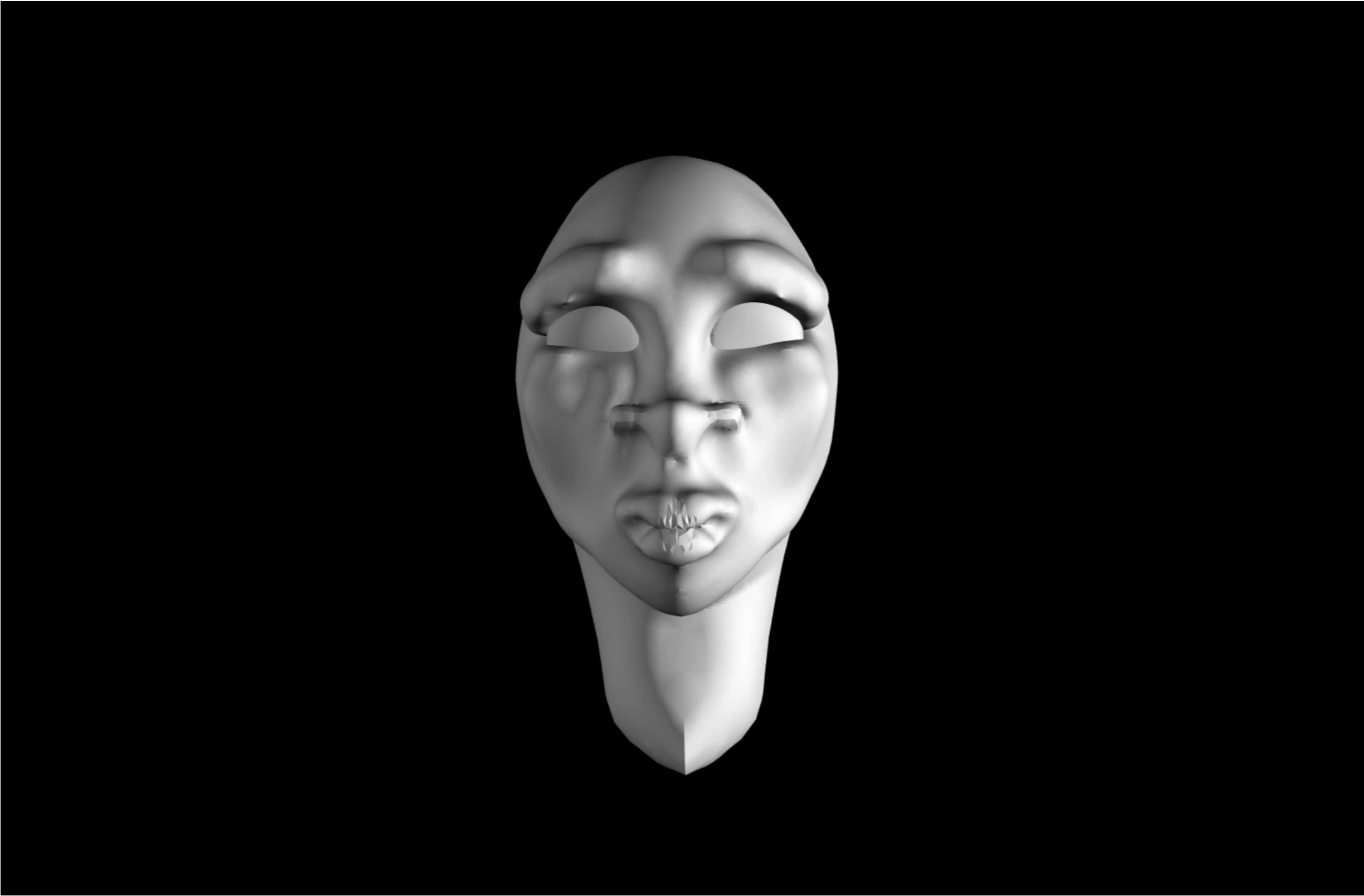| p (par) | k (car) | s (sel) | b (bon) | m (ma) | l (loup) | g (gare) | y (fille) |
d (dos)	v (va)	r (rat)	n (non)	t (ta)	ch (chat)		ng (camping)
j (joue)	z (base)		ui (nuit)	f (fa)	gn (vigne)		
					w (oui)		
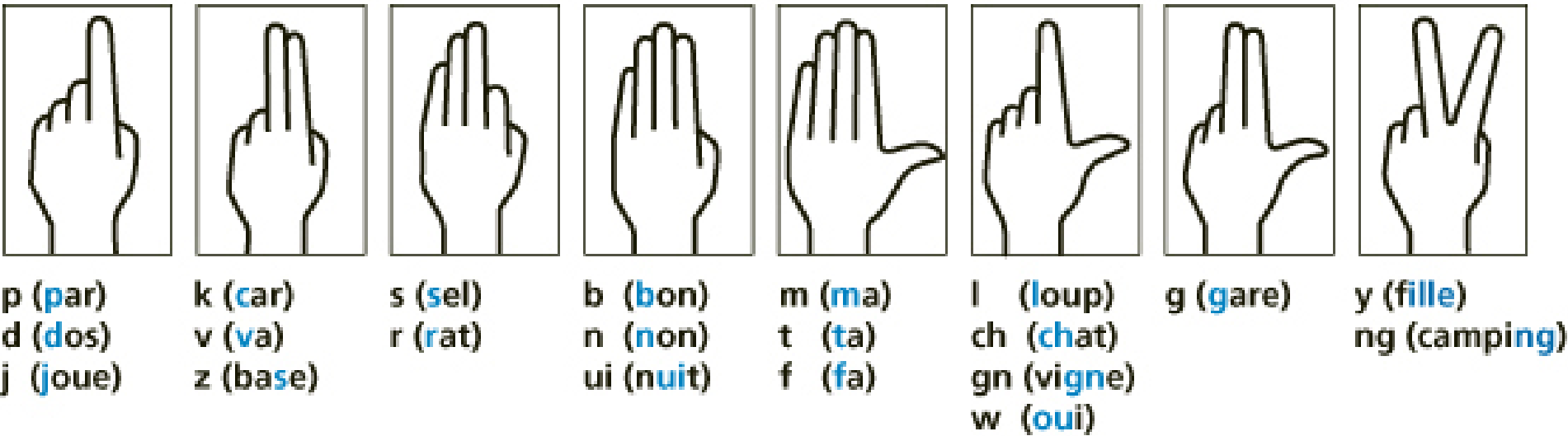
Clés Consonnes
based on phonem (IPA)

Leap Motion

Leap Motion to detect hand configuration

Wuta

3D model sculpted with expressions

Main Clé, online platform to learn and train for the LPC 2019

For whom is this platform

?

Fondation Acapella

«Nos statuts nous donnent une mission : favoriser l'intégration sociale, scolaire et professionnelle des sourds et malentendants avec l'aide du LPC.»
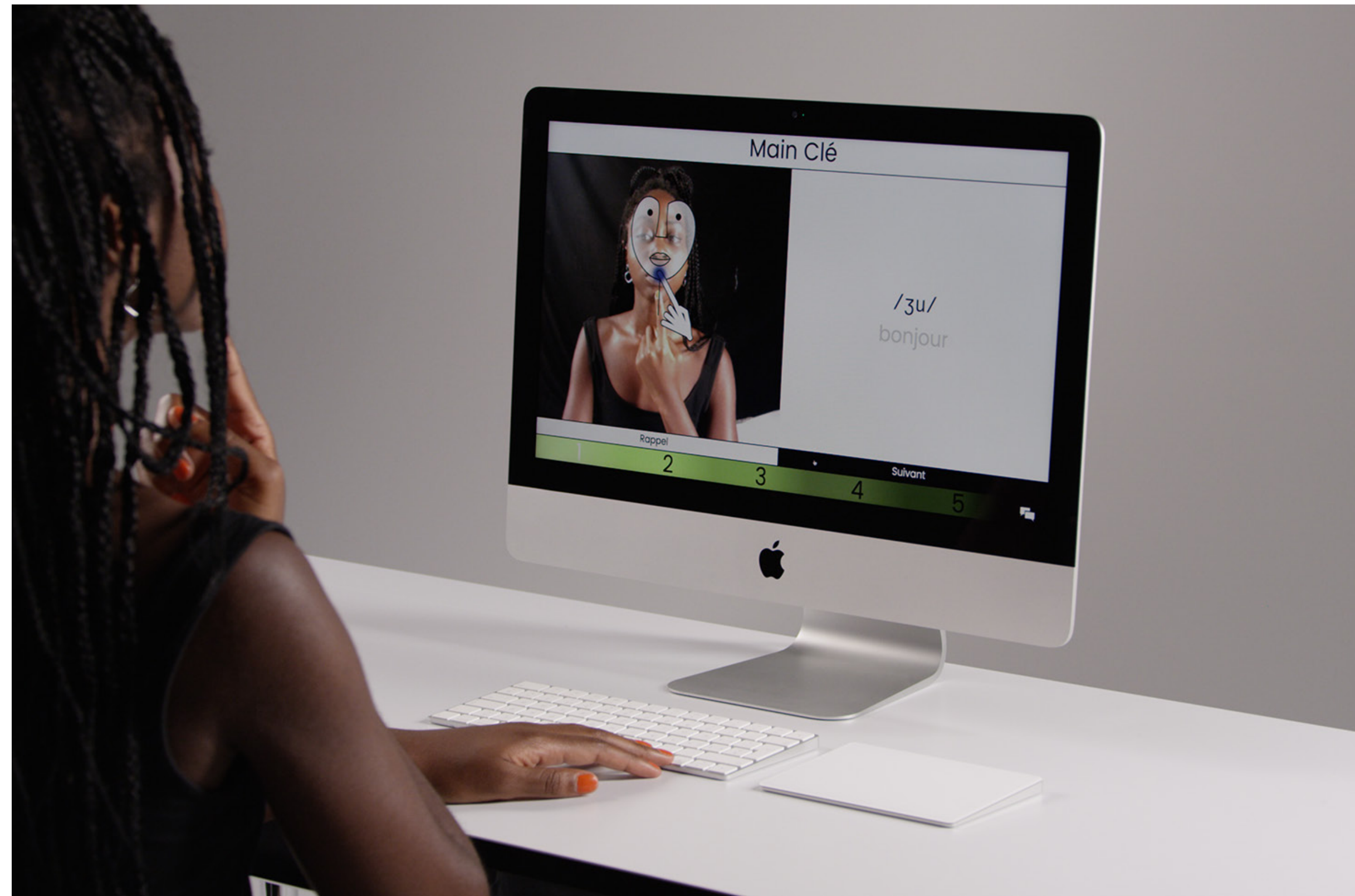
Leap Motion vs OpenPose
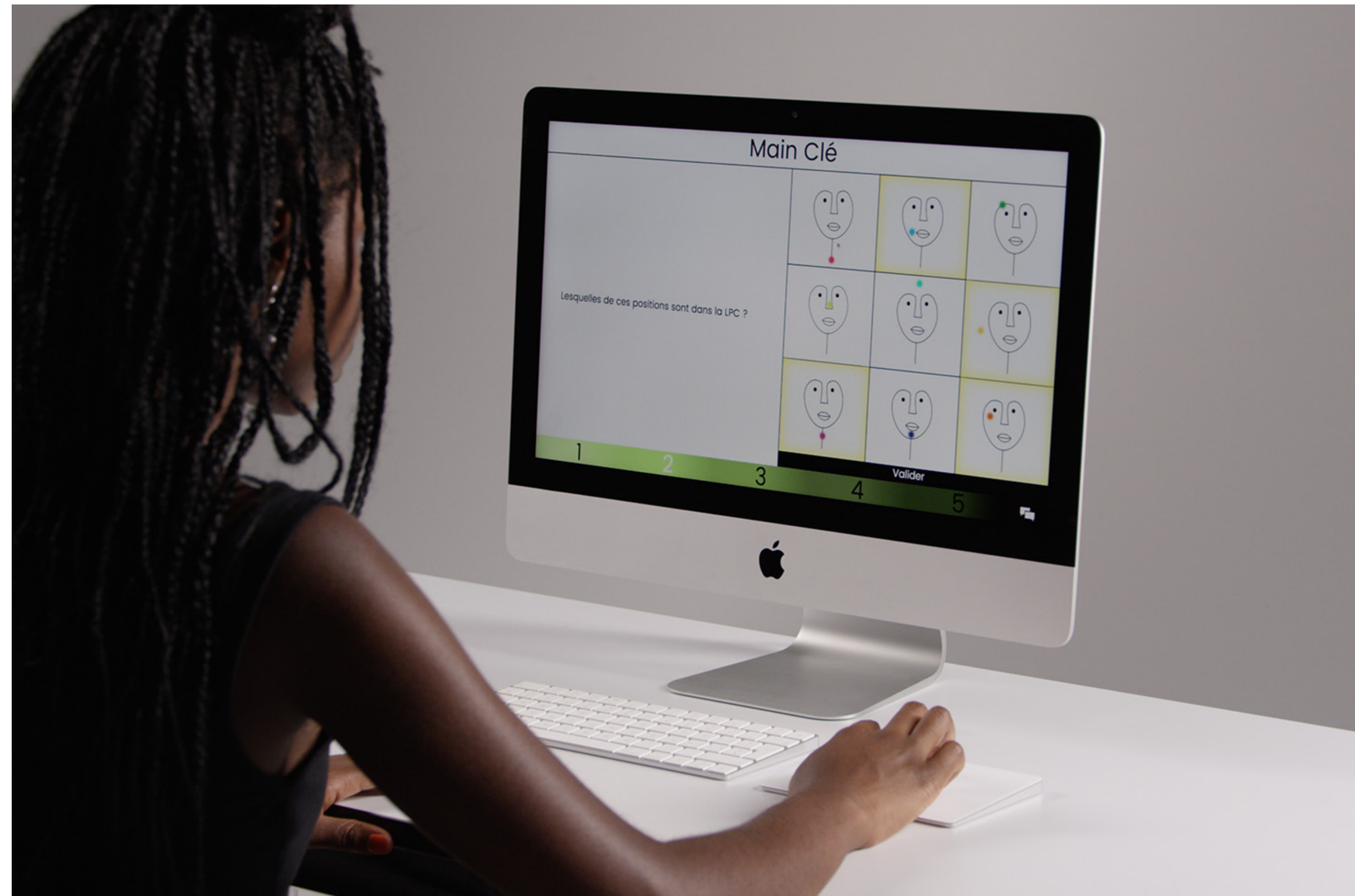
Main Clé, 5 exercises + a chat

5 progressive and playful exercises
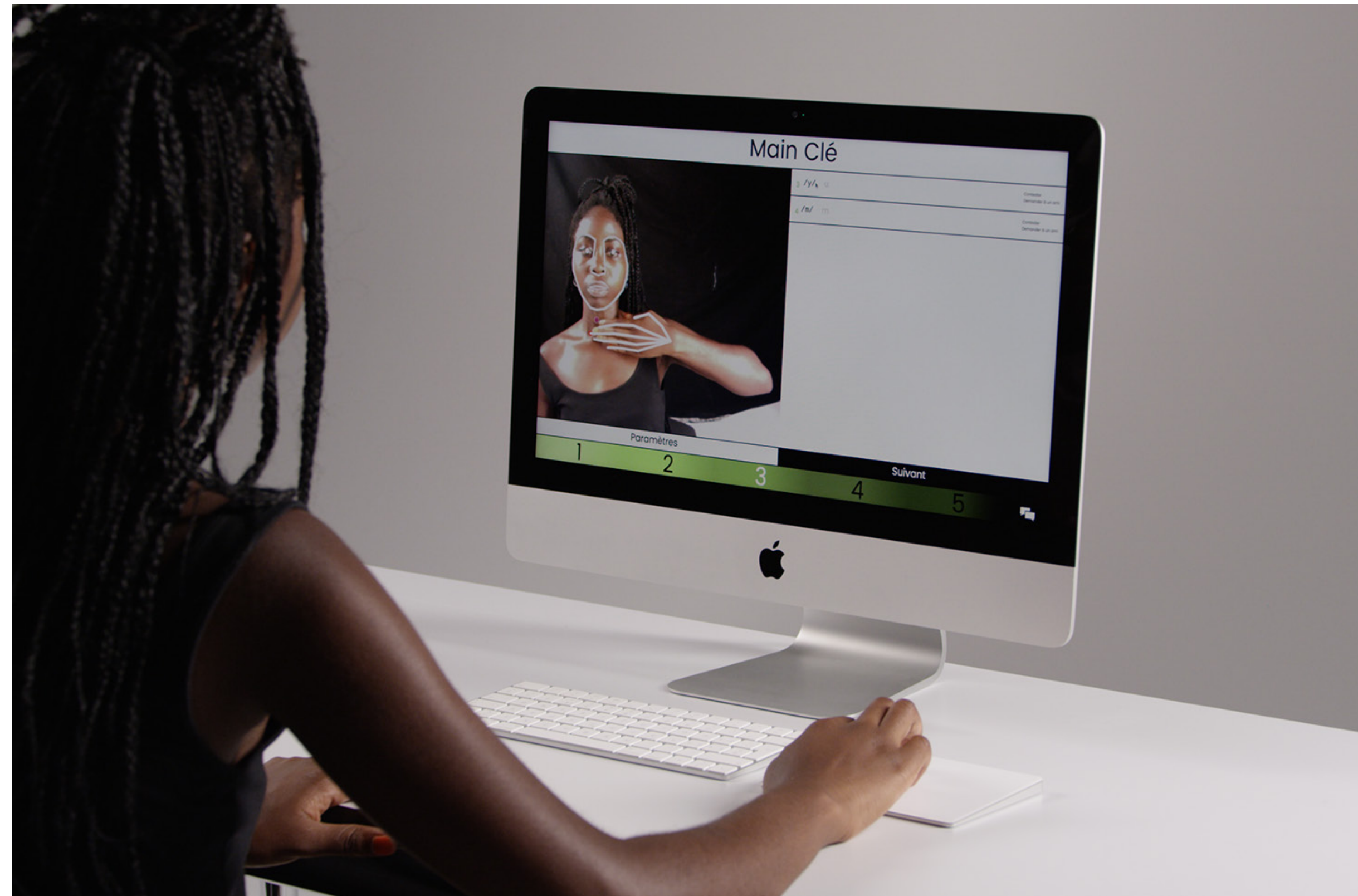
Main Clé, Exercise 1, Imitation

Learn how to do specific sentence in LPC by imitation
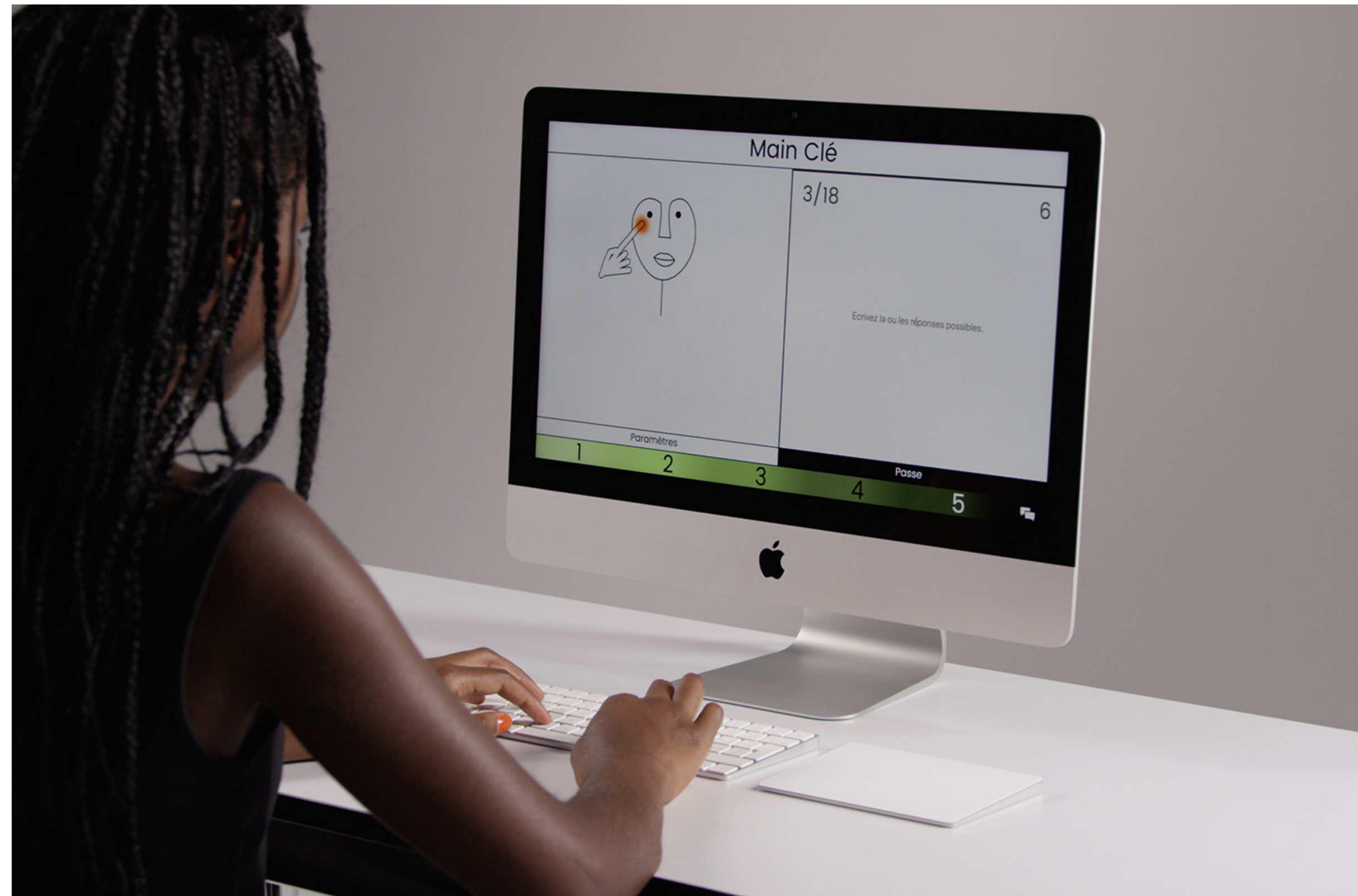
Main Clé, Exercise 2, survey

Before going further, train to know very well the LPC combinaison with exercise 2

Main Clé, Exercise 3, gestual karaoke

Practicing LPC by changing the speed and the length of the sentence

Main Clé, Exercise 4, decode

Try to recognize what are the syllabe behind a gesture

Main Clé, Chat

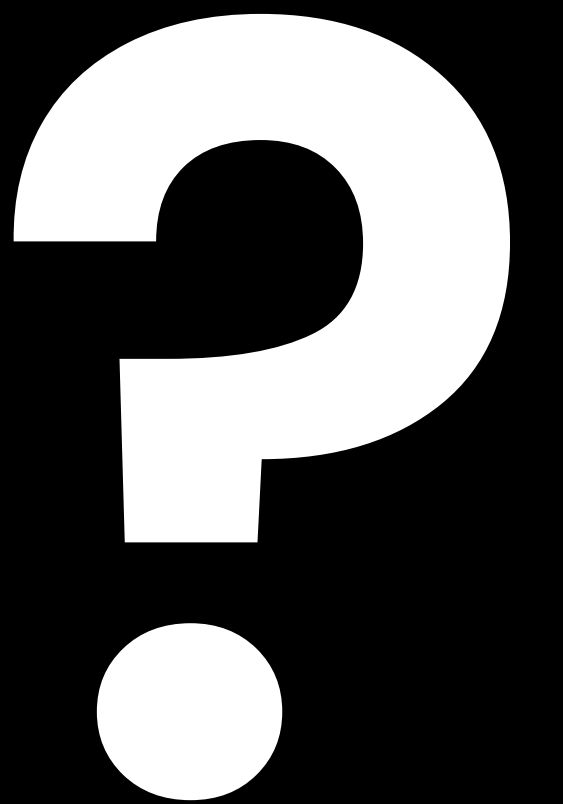Try to recognize what are the syllabe behind a gesture

Why LPC rather than sign language

?

Is my project accessible to everyone

?

How do I include people who are knowledgeable and concerned about the topic in the decision making process

?

Where are the deaf or hard of hearing people who do not practice the LPC in my everyday life

?

Thank you for listening

**Diversity Actions:
Imagine inclusive technologies
2021 — Iyo Bisseck**