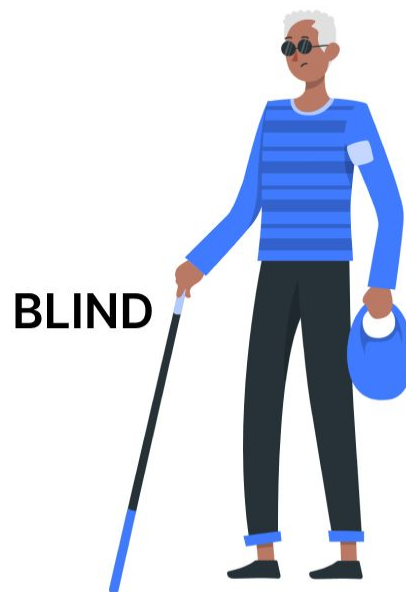


BROTHER + LIS + BRAILLE



WHERE DID WE BEGIN?

DA DOVE ABBIAMO INIZIATO?

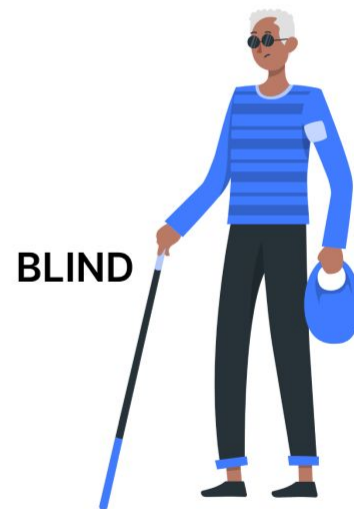


WHERE DID WE BEGIN?

DA DOVE ABBIAMO INIZIATO?



HOW TO
COMMUNICATE?

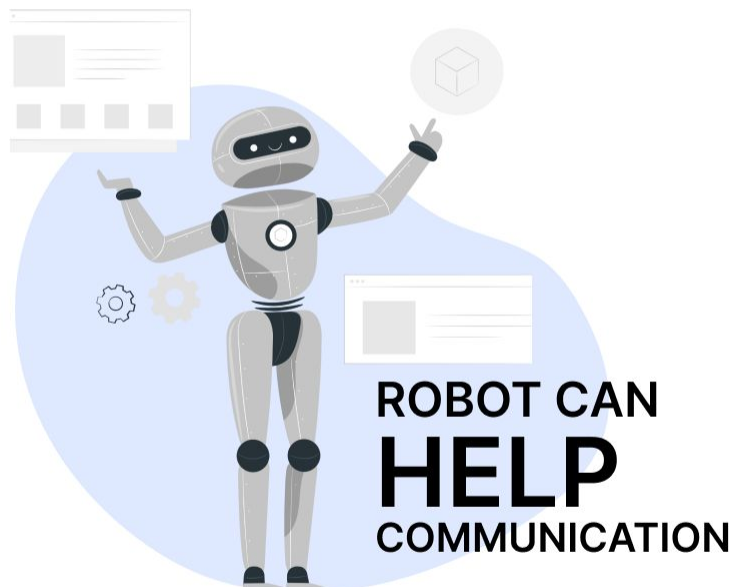


WHAT DID WE THINK OF?

A COSA ABBIAMO PENSATO?



MUTE

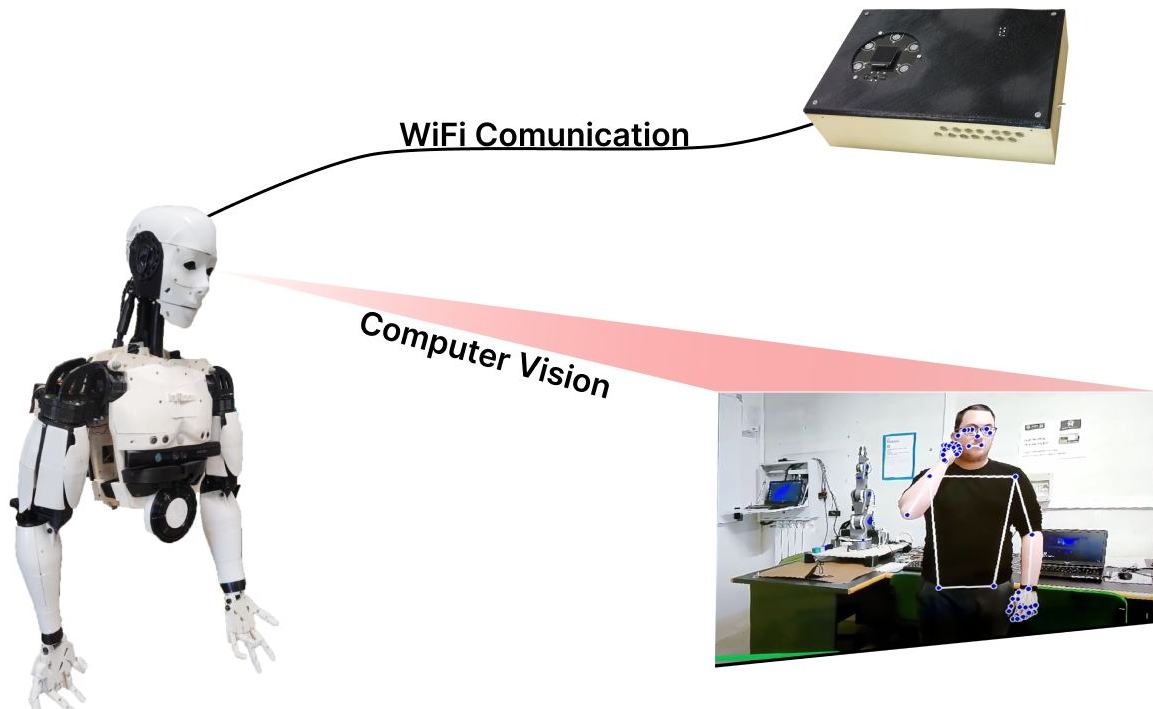


BLIND



STRUCTURE OF THE PROTOTYPE

STRUTTURA DEL PROTOTIPO



STRUCTURE OF THE PROTOTYPE

STRUTTURA DEL PROTOTIPO



Micro Camera

look at the front and detect face

Ultrasonic Sensor

measure distance between robot and person



PIR Sensor

detect the presence of a person nearby

Kinetic Cam

trace the skeleton of the body of the person in front of it



STRUCTURE OF THE PROTOTYPE

STRUTTURA DEL PROTOTIPO



MKR IoT Carrier

shows on the display what is being reproduced in braille



Braille 6 Dots Matrix

display in braille via the dots that move up and down



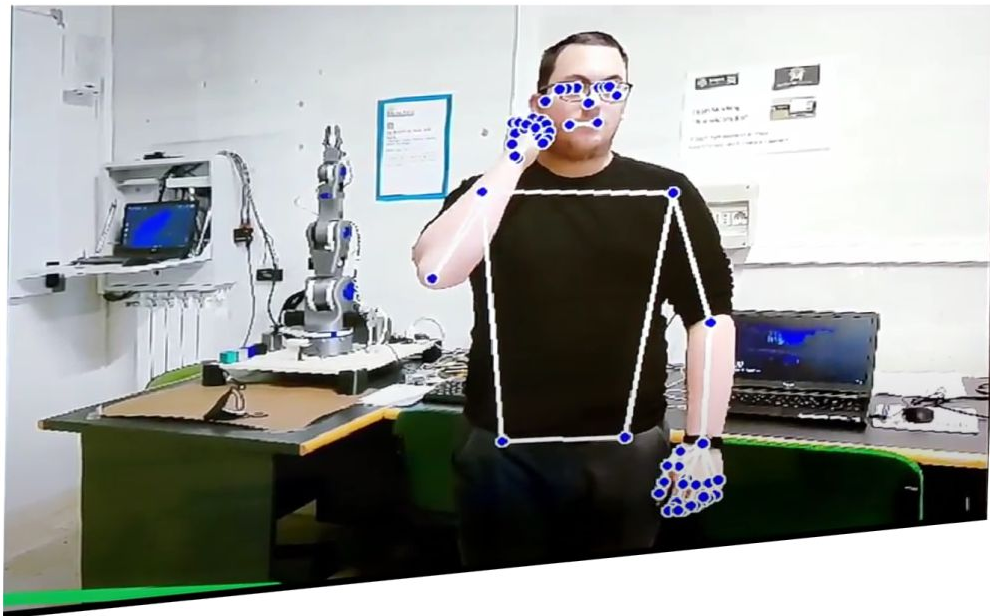
Arduino MKR 1010 WiFi

controls the electronics and receives via WIFI the words to be displayed



STRUCTURE OF THE PROTOTYPE

STRUTTURA DEL PROTOTIPO



We use  MediaPipe
for tracking the body points

We captured a sequence
of data in the time to create
a dataset to train an
Artificial Intelligence model

HOW DID WE USE ARTIFICIAL INTELLIGENCE?

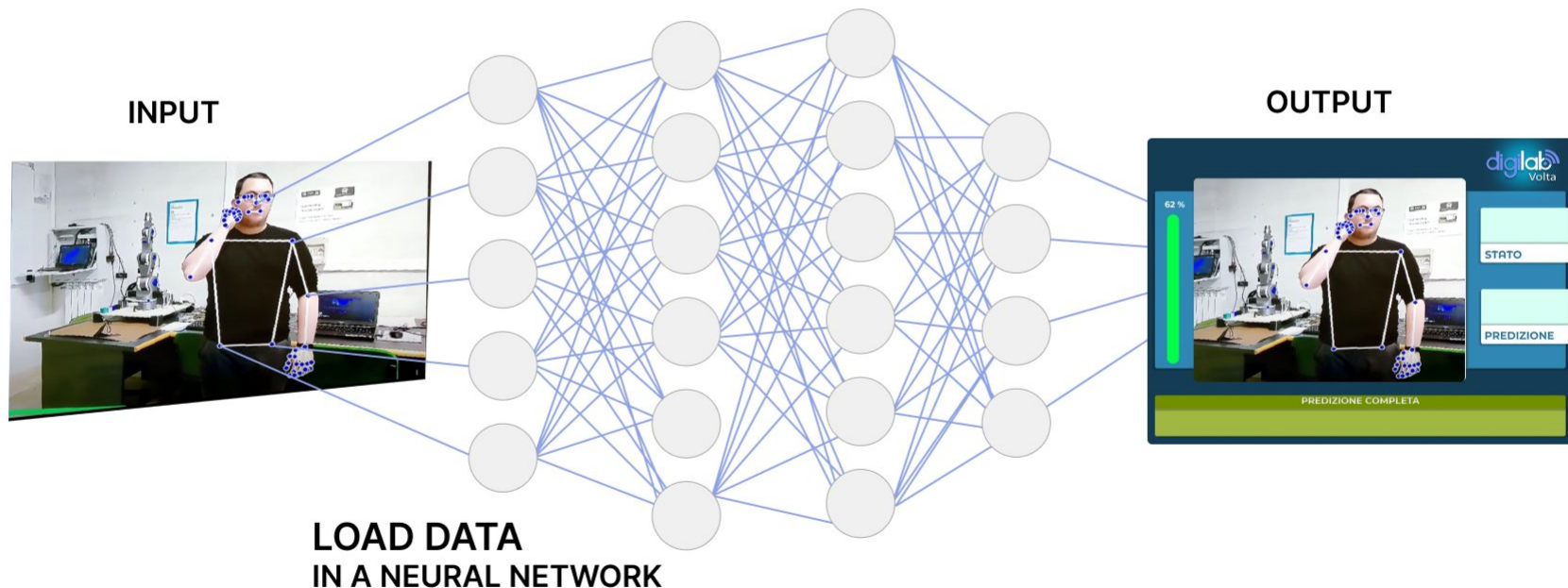
COME ABBIAMO USATO L'INTELLIGENZA ARTIFICIALE?

WE CAPTURED
A SEQUENCE
OF FRAMES



HOW DID WE USE ARTIFICIAL INTELLIGENCE?

COME ABBIAMO USATO L'INTELLIGENZA ARTIFICIALE?



HOW DID WE USE ARTIFICIAL INTELLIGENCE?

COME ABBIAMO USATO L'INTELLIGENZA ARTIFICIALE?



62 %

digilab
Volta

STATO

PREDIZIONE

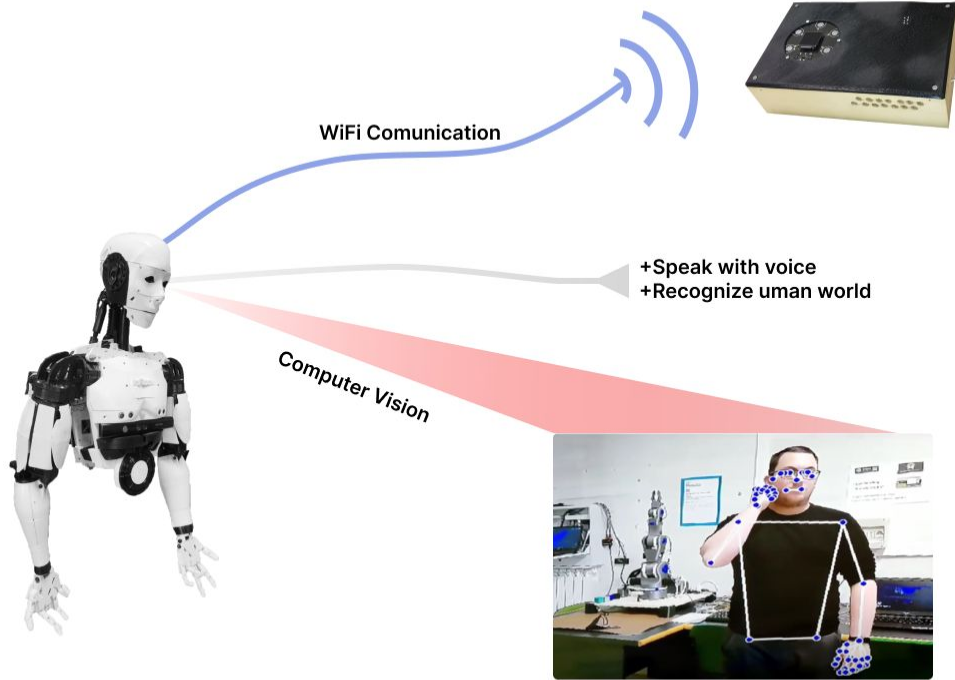
PREDIZIONE COMPLETA

TRY TO
PREDICT
WHICH SIGN WE
ARE DOING



TRANSMITT EACH WORD VIA WIFI

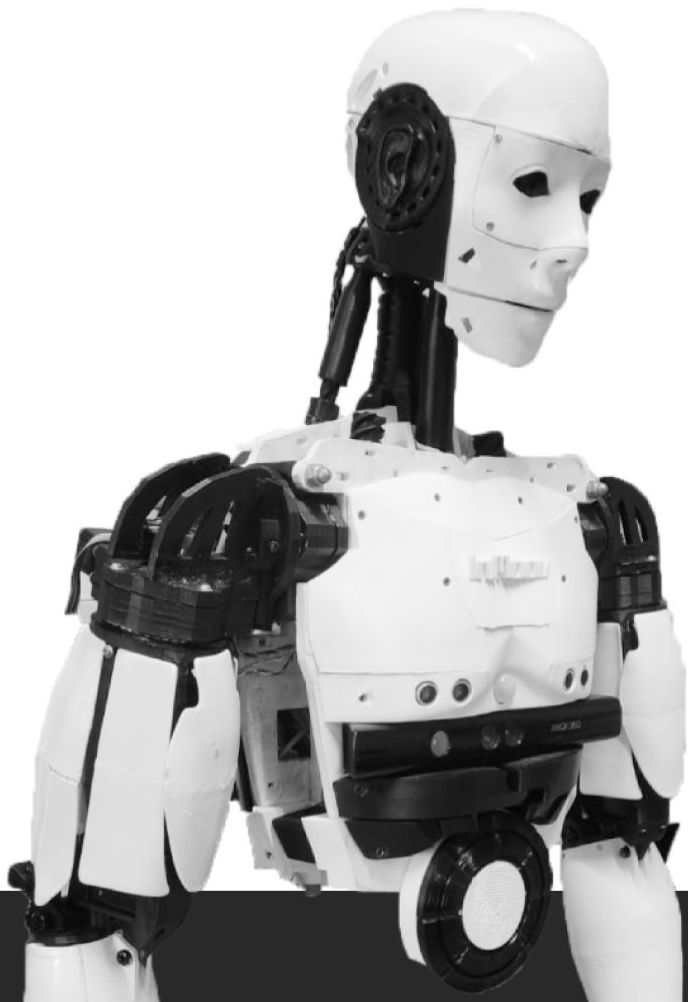




BLIND
Touch braille pin



MUTE or DEAF-MUTE
Do sign language



BROTHER + LIS + BRAILLE

