



AI and Robotics for Accessibility

Robota Psyche, Spring 2021

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 - How to make positive impact?

WHY

should we
care??

WHY

should we
care??

- Rate from 1 (least) - 10 (most) the importance of accessible technologies in YOUR opinion right now.

WHY

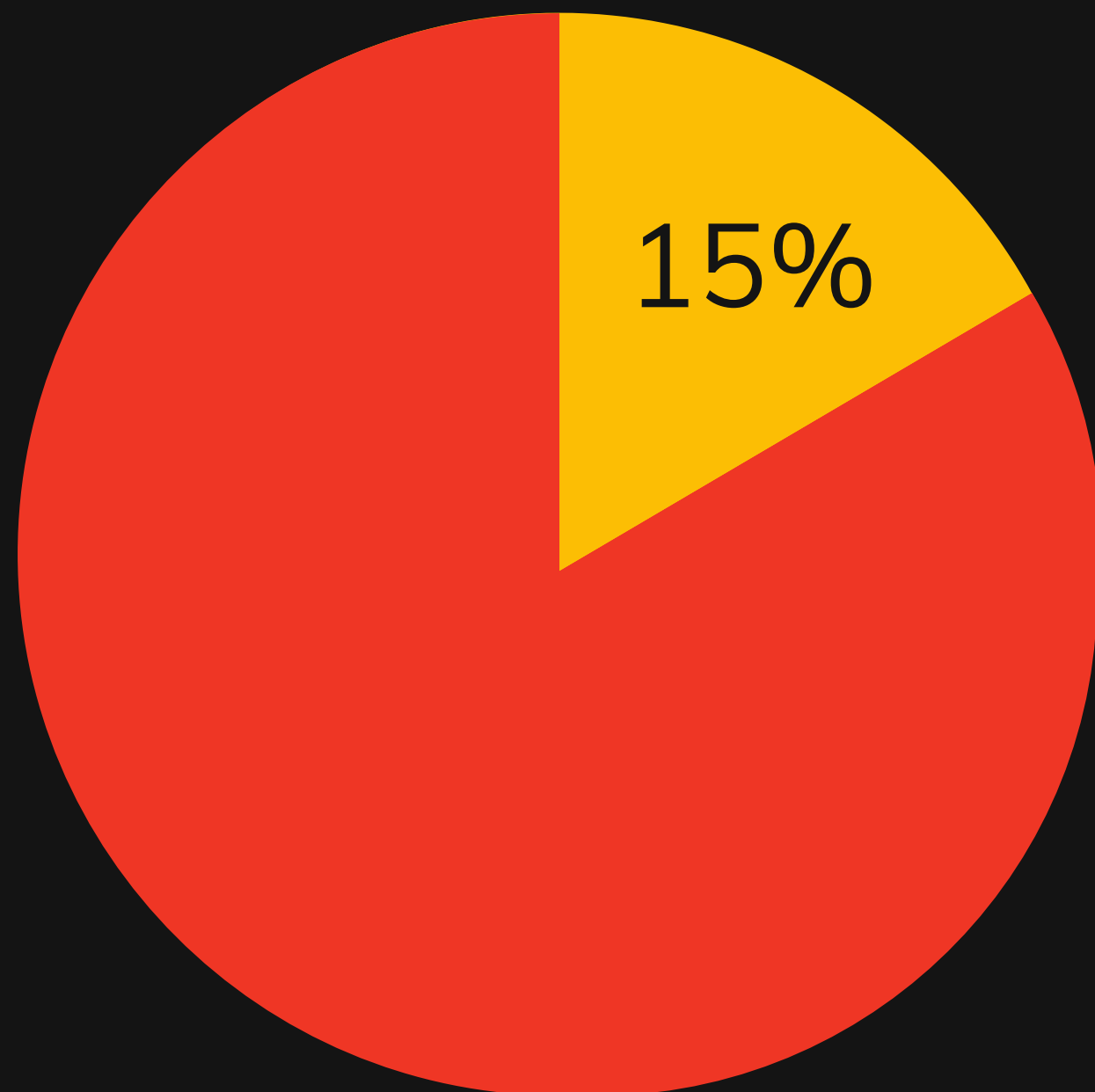
should we
care??

- Rate from 1 (least) - 10 (most) the importance of accessible technologies in YOUR opinion right now.
- Thumbs up if you know someone who has a visible or invisible disability.

WHY

should we
care??

- Rate from 1 (least) - 10 (most) the importance of accessible technologies in YOUR opinion right now.
- Thumbs up if you know someone who has a visible or invisible disability.
- Type one technology you know that is made for accessibility.



1 Billion

people around the globe
identify as having a
disability, visible or invisible.





Or...



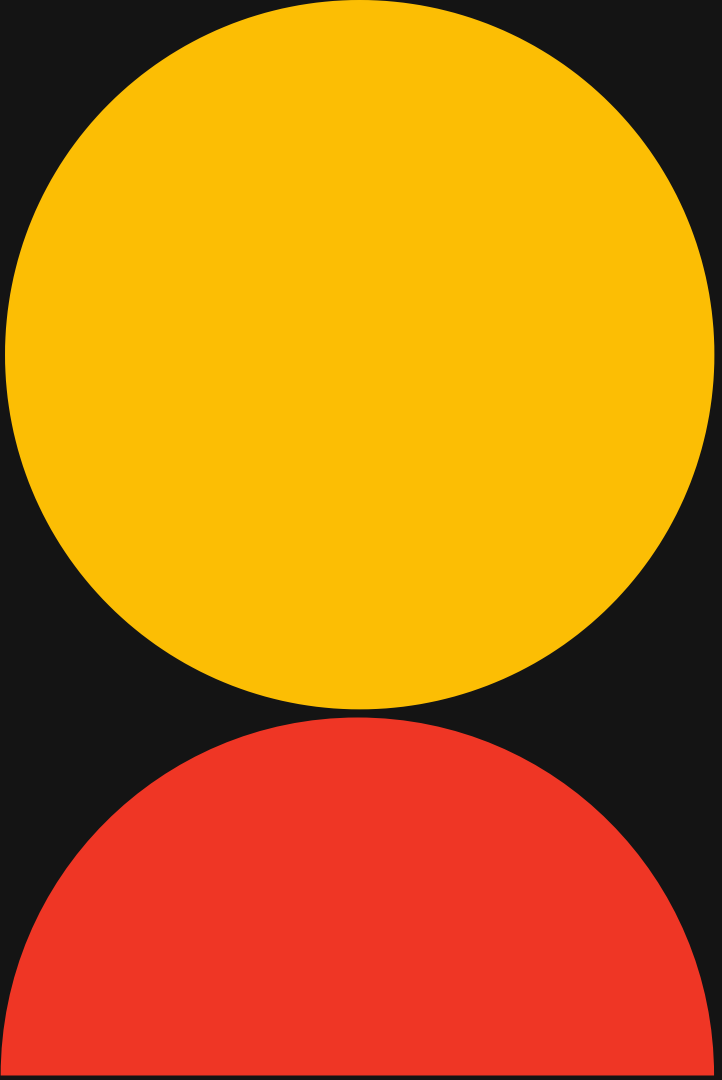
Or...

there are over 6.4 billion
people who are *temporarily*
able-bodied.



**In the future, reasonable
accommodation for people with
disabilities will undoubtedly
include artificial intelligence.**

**- Furio Gramatica, Head of Technology Innovation at
Fondazione Don Carlo Gnocchi**



Software



Language translation and captioning



Automatic
sign language
provision



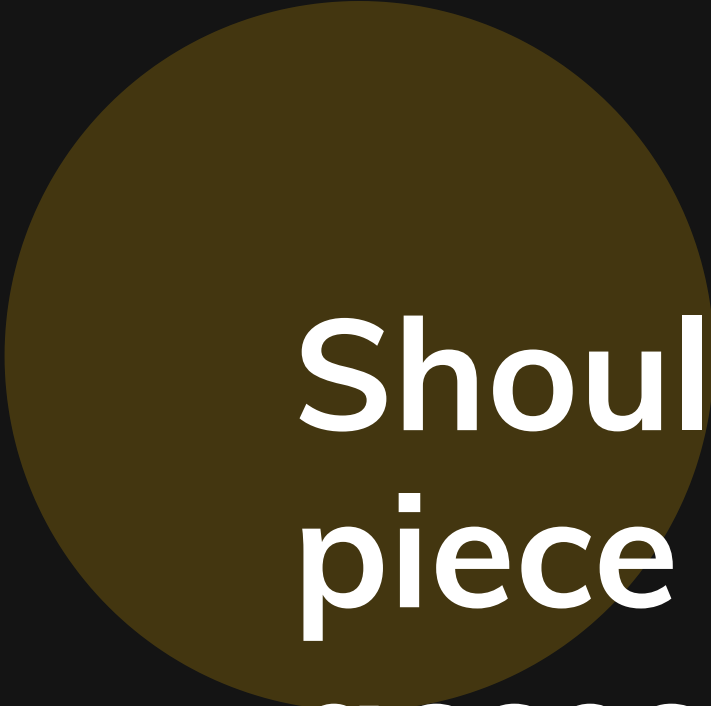
Automatic image recognition and alt text



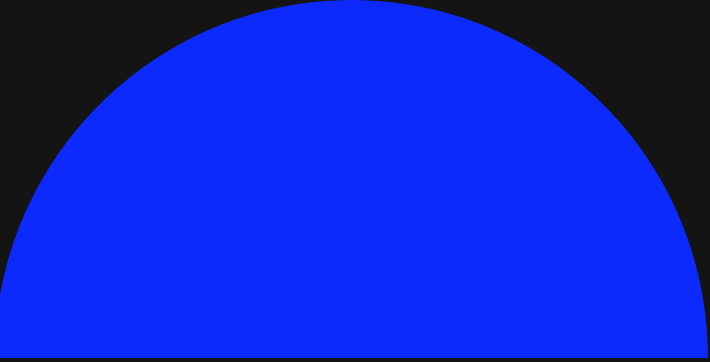
There are limitations,
but machine learning
is **revolutionizing**
user-experience for
folks with disabilities.



discussion[0]



Should every technology
piece or service utilize
accessibility software?
Why?



Hardware



The Eyewriter



The Emma Watch



The Robotic Wheelchair



discussion[1]




What are your
impressions /
reactions?



...Systems should be user-centric and designed in a way that allows all people to use AI products or services, regardless of their age, gender, abilities or characteristics...AI systems should not have a one-size-fits-all approach and should consider Universal Design principles addressing the widest possible range of users, following relevant accessibility standards.

- EU Ethics Guidelines for Trustworthy AI

discussion[2]



How does the
human-centered
design look like to
you?

discussion[3]



The case of Clubhouse.

A necessary evil or an
antidote to human-
centered design?

Principles of Universal Design



WHY
we make

WHAT
we make

How to design accessible
experiences?

WHO
makes it

WHO
uses it

HOW
it's made

WORKS CITED

<https://digileaders.com/5-ways-ai-transform-digital-accessibility/>

<https://www.morningfuture.com/en/article/2018/01/08/robot-artificial-intelligence-people-disabilities/199/>

<https://transmitter.ieee.org/how-robots-are-improving-the-lives-of-people-with-disabilities/>

<https://medium.com/lexisnexis-design/how-ai-can-influence-accessibility-aadd6a398996>



Thank You!

- Rate from 1 (least) - 10 (most) the importance of accessible technologies in YOUR opinion after this presentation.