Artificial Intelligence for the Inclusion of People with Disability

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Fundación ONCE

- 1938: ONCE (Spanish National Organization for the Blind)
  - Personal autonomy and full integration of the blind and severely visually impaired people

- 1988: Fundación ONCE
  - Social inclusion of people with disabilities, and improvement of their quality of life

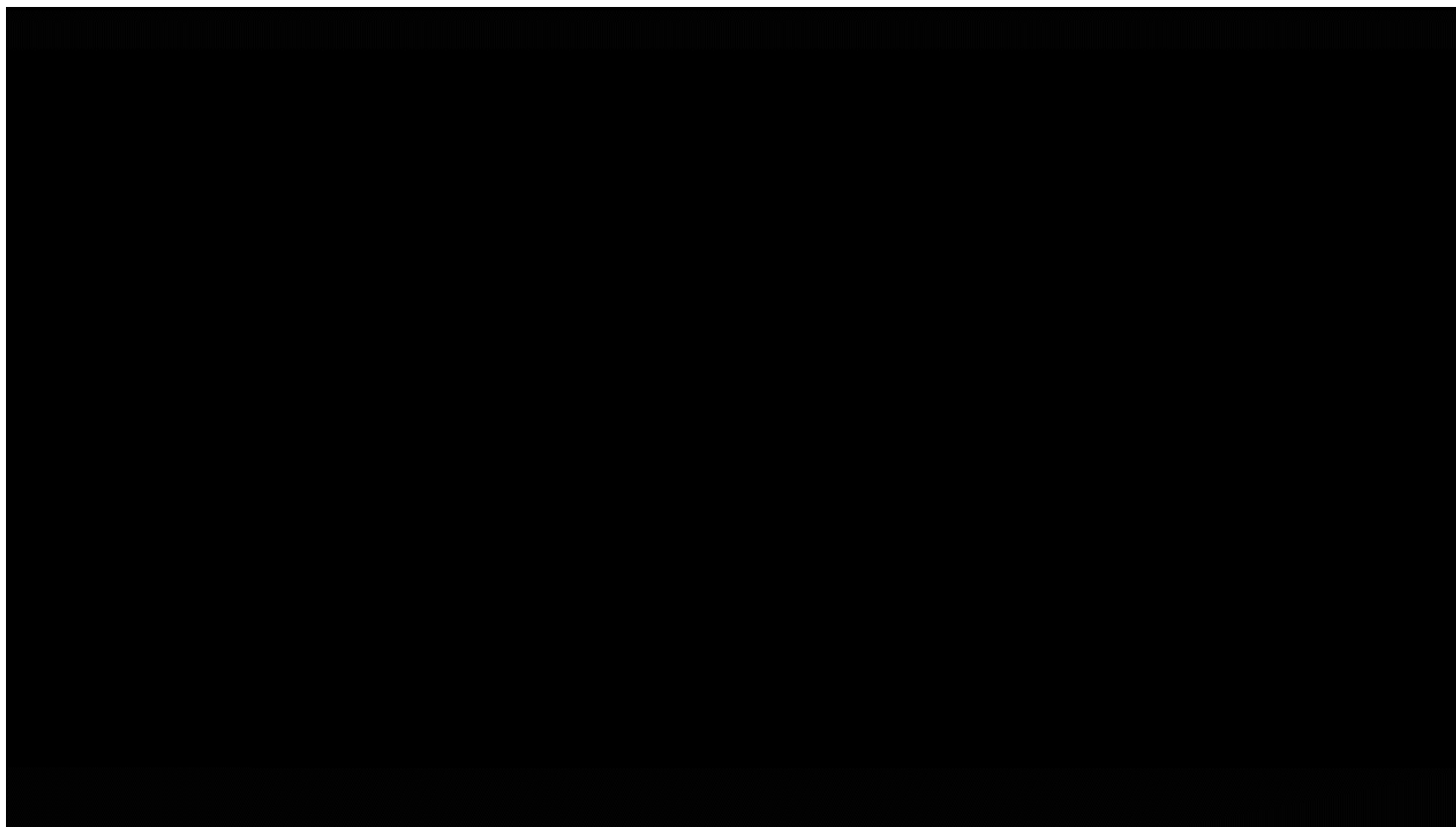| **Employment and training for people with disabilities**	• Promotes training courses and jobs opportunities for people with disabilities
Universal accesibility and Design for All	• Enabling the design of accesible environments, products and services

AI in our projects

- AI to improve the life of people with disabilities.

AI in all our projects

- **Natural Language Interaction**
    - Web embedded chatbot to navigate in an easy way
    - Virtual receptionist

- **Speech to text**
    - Automated subtitles

- **Text to speech**
    - Cloning of real human voices to naturalize the transmission of information

- **Machine Learning Algorithms**
    - Detection of mentions about disability on the web
    - Detection of assistive technology projects on the web

- **Image recognition**
    - Objects at office to know how to interact with them for Low Vision People and Cognitive disability people
    - Optical Character Recognition: restaurant menu, business card, train information…

Examples

- Accessjobs

- Accessrobots

- Accessibilitech

Accessjobs

- A web video conferencing platform, that is going to allow to hold accessible and inclusive meetings

- AI in Accessjobs:
    - Image recognition on slides to text

[{
  "type": "p",
  "text": "1. Formación y empleo"
},
{
  "type": "p",
  "text": "Actualmente el gaming genera 8.000 empleos directos en España. Dado el crecimiento de aficionados de los eSports en los últimos años, que se espera un 20% de crecimiento para el año 2020, y la profesionalización del territorio, se estima un crecimiento en la generación de empleos a 9.800 empleos para 2020."
},
{
  "type": "img",
  "text": "hombre jugando un juego de computadora"
}]

Accessjobs

- AI in Accessjobs:
    - Automated subtitles in real time
    - Easy to read rules applied to subtitles and result of image recognition
    - Offline generator of segmented and grammatically punctuated transcriptions
    - Offline generator of extractive abstract based on transcription

Accessrobots

- Robotic platform to help people with disability at home...

Accessrobots

- … hospital and transport.

Accesibilitech

- **Objective**: to define, validate and implement an advanced methodology to identify, analyse, disseminate and transfer innovative projects that use technology to guarantee the accessibility of people with disabilities in the areas of teleworking, e-learning and online care services.
  - o Automated search of projects in given sources
  - o Automated search of projects on the Internet
  - o Automated classification of projects found
  - o Automated detection of parameters to be considered for classification and detection
  - o Mapping tool that will collect

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