

Intelligenza o ignoranza artificiale

EMANUELE FRONTONI

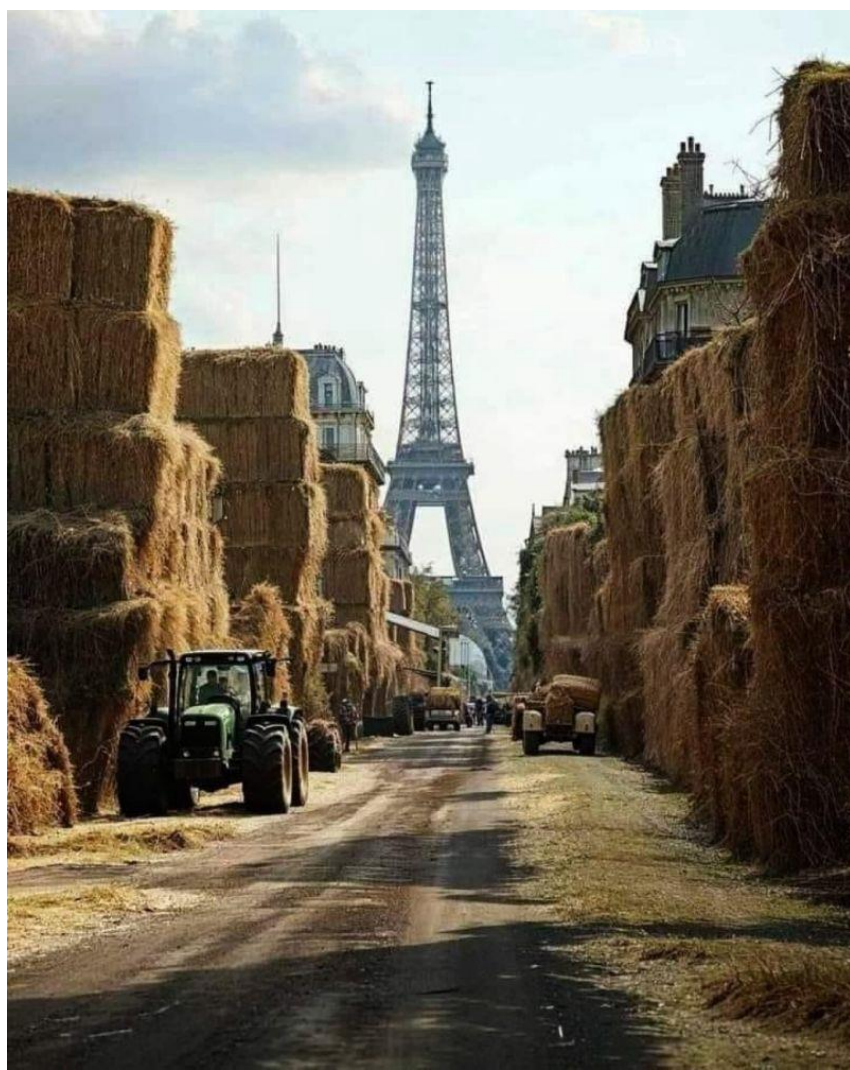
Full Professor of Computer Science UNIMC

Co-director VRAI Lab

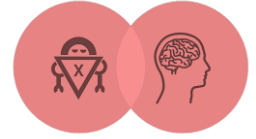
VRAI
vision robotics
artificial
intelligence







Come disciplina scientifica, nel 1956



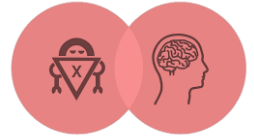
✦ Conferenza di Dartmouth 1956

- John McCarty ha coniato il termine **Artificial Intelligence**



Trenchard More, John McCarthy, Marvin Minsky, Oliver Selfridge, Ray Solomonoff

Erano molto ottimisti ...



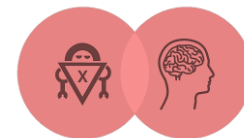
✦ **“Nel 1968 un computer sarà il campione del mondo di scacchi”**

Simon e Newell, 1958

✦ **“In 20 anni, i computer saranno in grado di fare ogni attività che gli umani possono fare”**

Simon, 1965

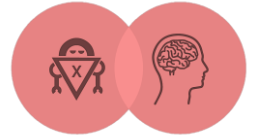
Per gli scacchi, è stato necessario aspettare il 1997
(Deep Blue, IBM)



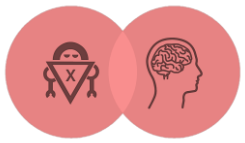
IBM Deep Blue vince contro Kasparov, 1997



Per la comprensione del linguaggio naturale, fino al 2011
(Watson, IBM)



Courtesy of IBM



Perchè tanto rumore adesso, dopo quasi 70 anni?

✦ **Potenza computazionale** dei computer che cresce in modo esponenziale

- Raddoppia ogni 18 mesi (legge di Moore, 1965)

✦ **Immense quantità di dati**

- Da usare come esempi per apprendere cosa fare

✦ **Algoritmi** migliori

- Es.: deep learning

YouTube

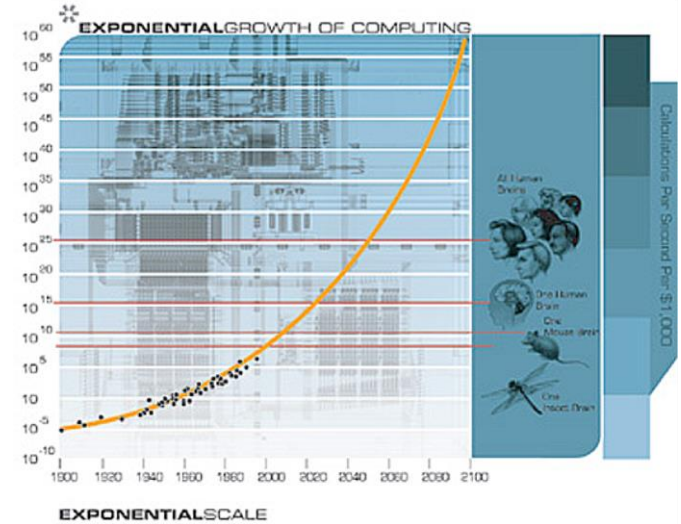
400 hours of video uploaded every minute

Walmart

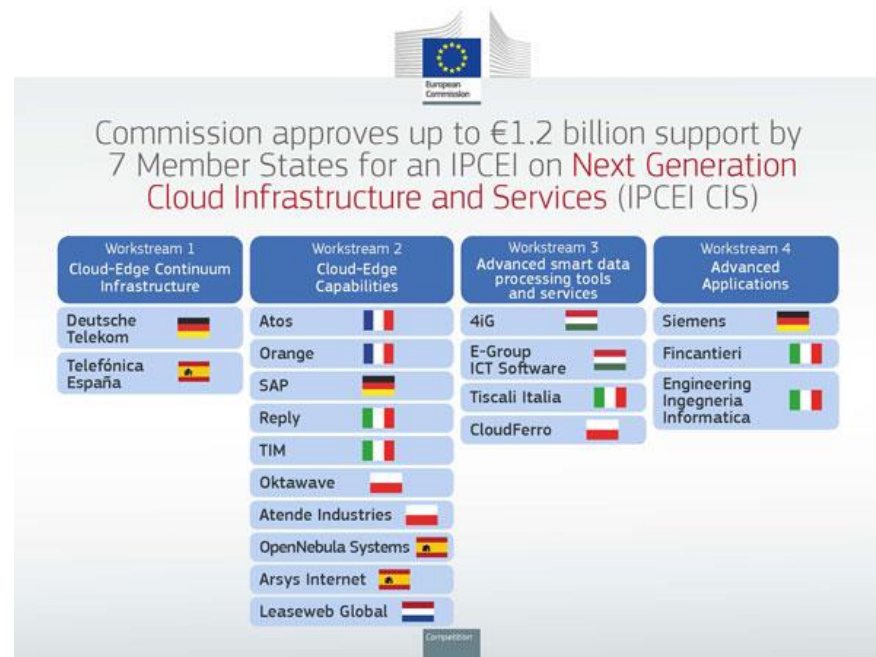
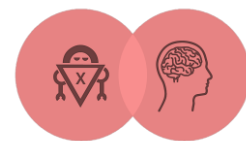
2.5 petabytes of customer data hourly

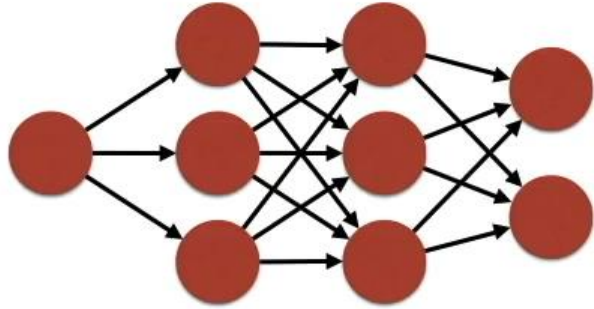
Facebook

350 million images uploaded daily

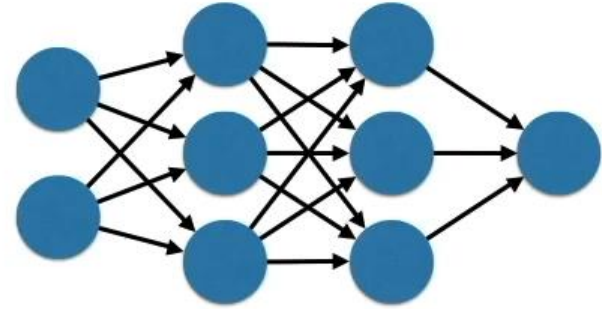


Buone notizie ...





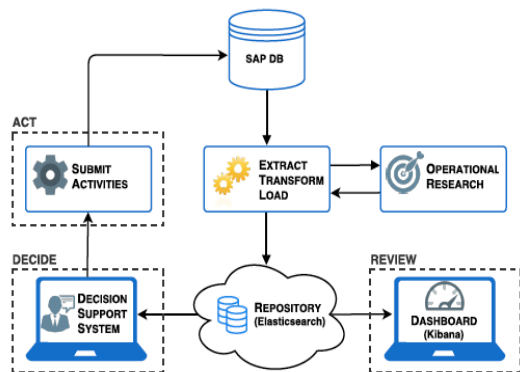
Generator



Discriminator

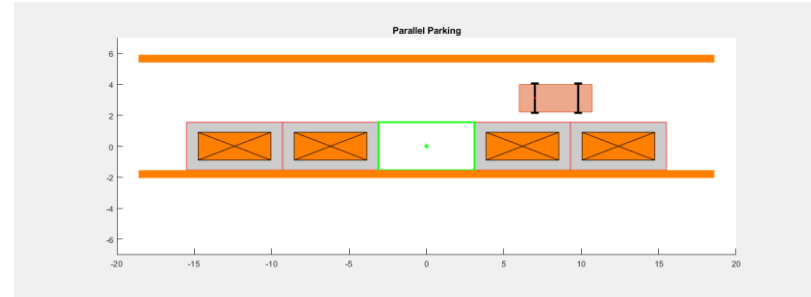
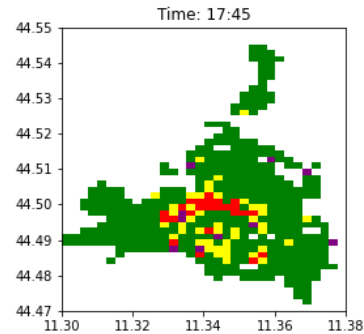
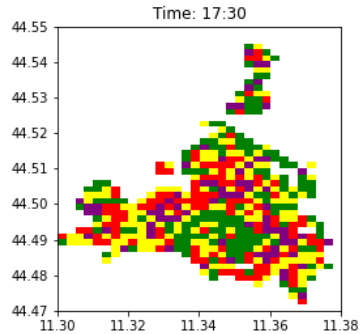
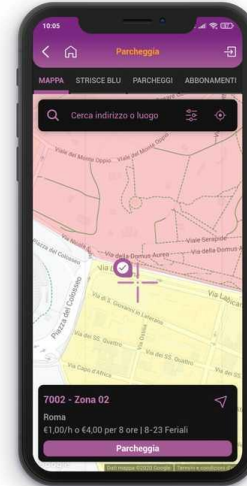
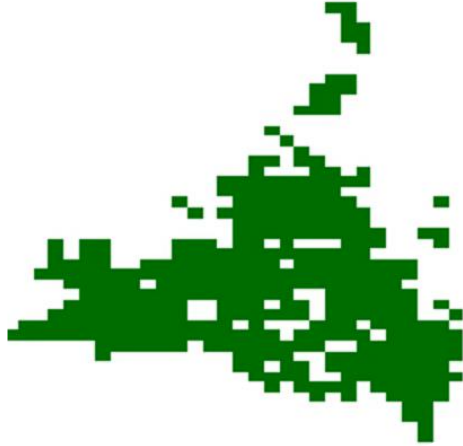


IL VALORE DEI DATI A SUPPORTO DELLA EFFICIENZA E DELLA PERSONALIZZAZIONE



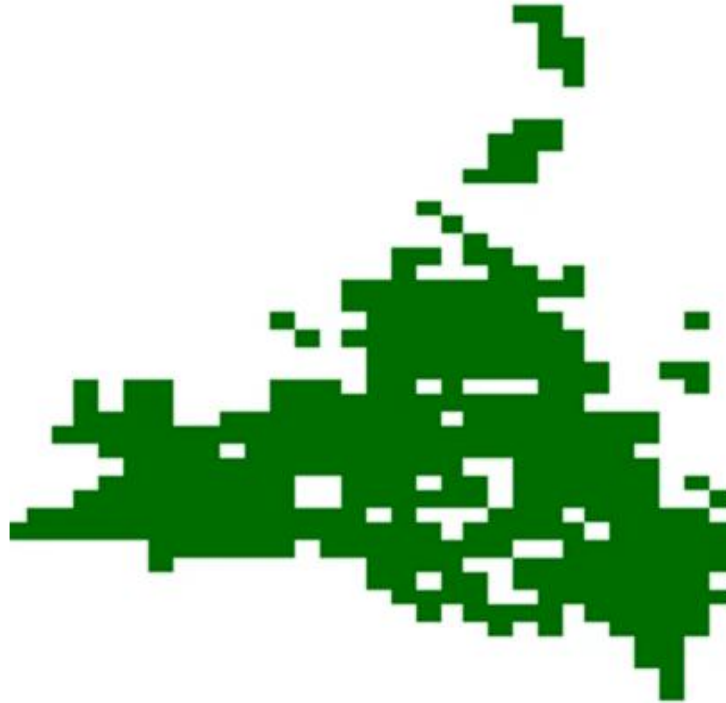
- Approccio Big Data per ottimizzare i costi legati alle eccedenze di magazzino
- Diminuire le eccedenze del 36%
- Origini dati a livello mondiale
- Machine Learning e Deep Learning
- Second market: produzione efficiente utilizzando l'apprendimento e la sala operatoria
- Programma di produzione settimanale per il second market

INTELLIGENZA ARTIFICIALE E SOSTENIBILITÀ DELLE CITTÀ



INTELLIGENZA ARTIFICIALE E SOSTENIBILITÀ DELLE CITTÀ

Time: 0:00



TRENDS & STYLES

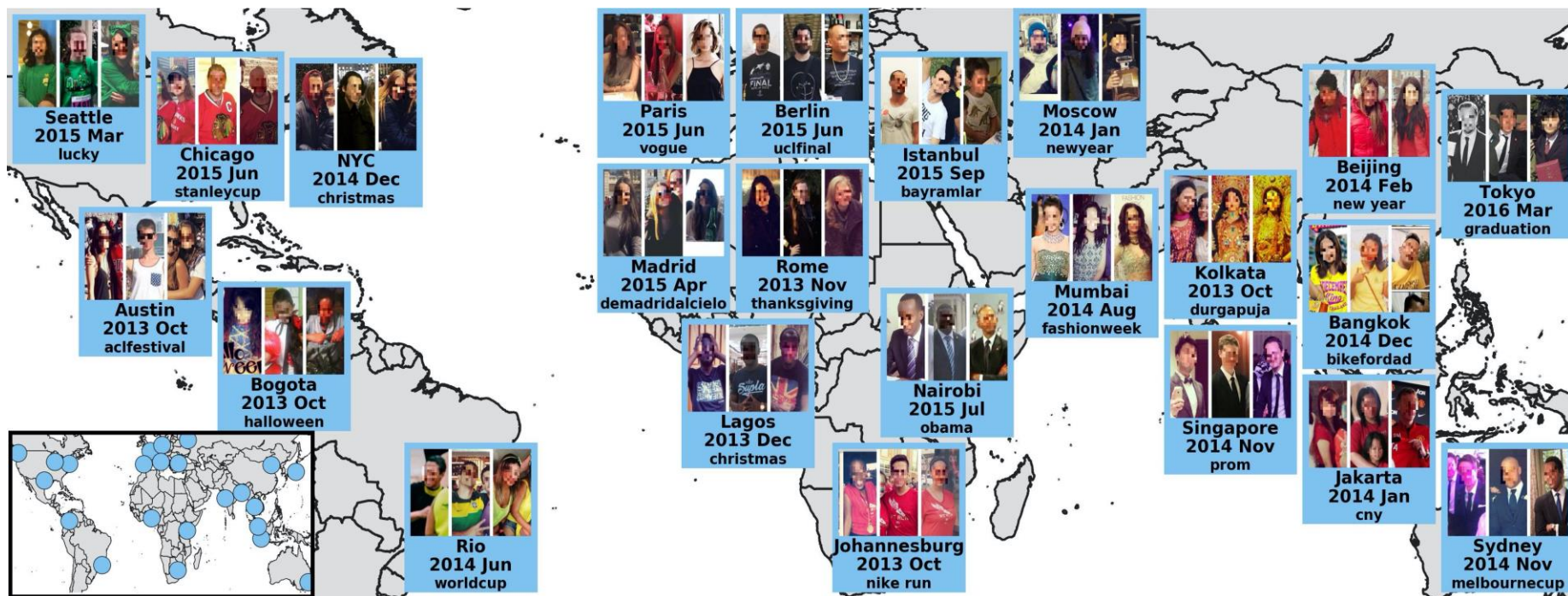


80.000 immagini / ora



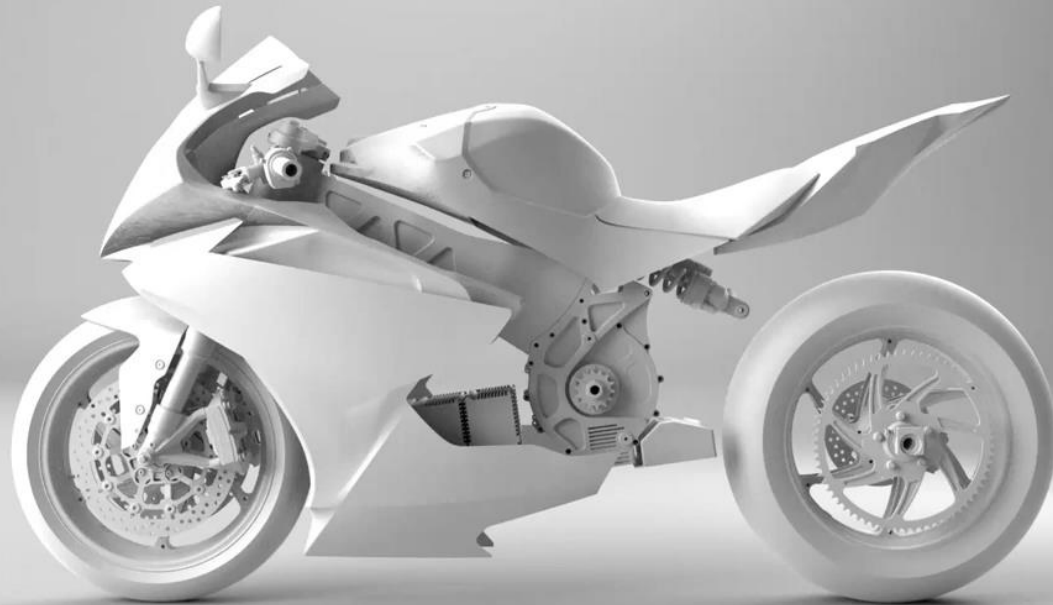
Liu, W., Anguelov, D., Erhan, D., Szegedy, C., Reed, S., Fu, C. Y., & Berg, A. C. (2016, October). Ssd: Single shot multibox detector. In *European conference on computer vision* (pp. 21-37). Springer, Cham.

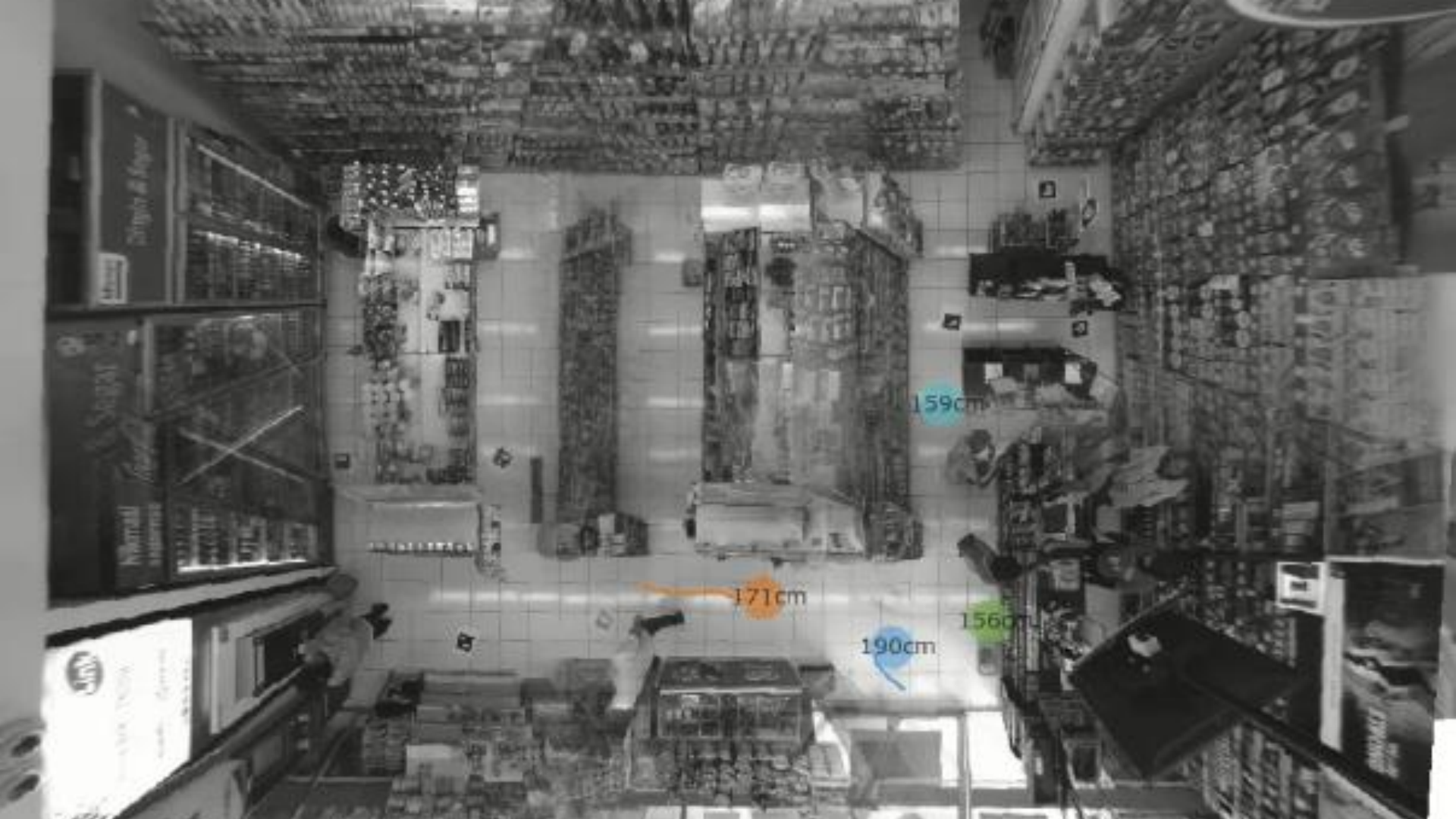
GeoStyle DATASET





GENERATIVE DESIGN & PROMPT





159cm

171cm

190cm

156cm

hba-project



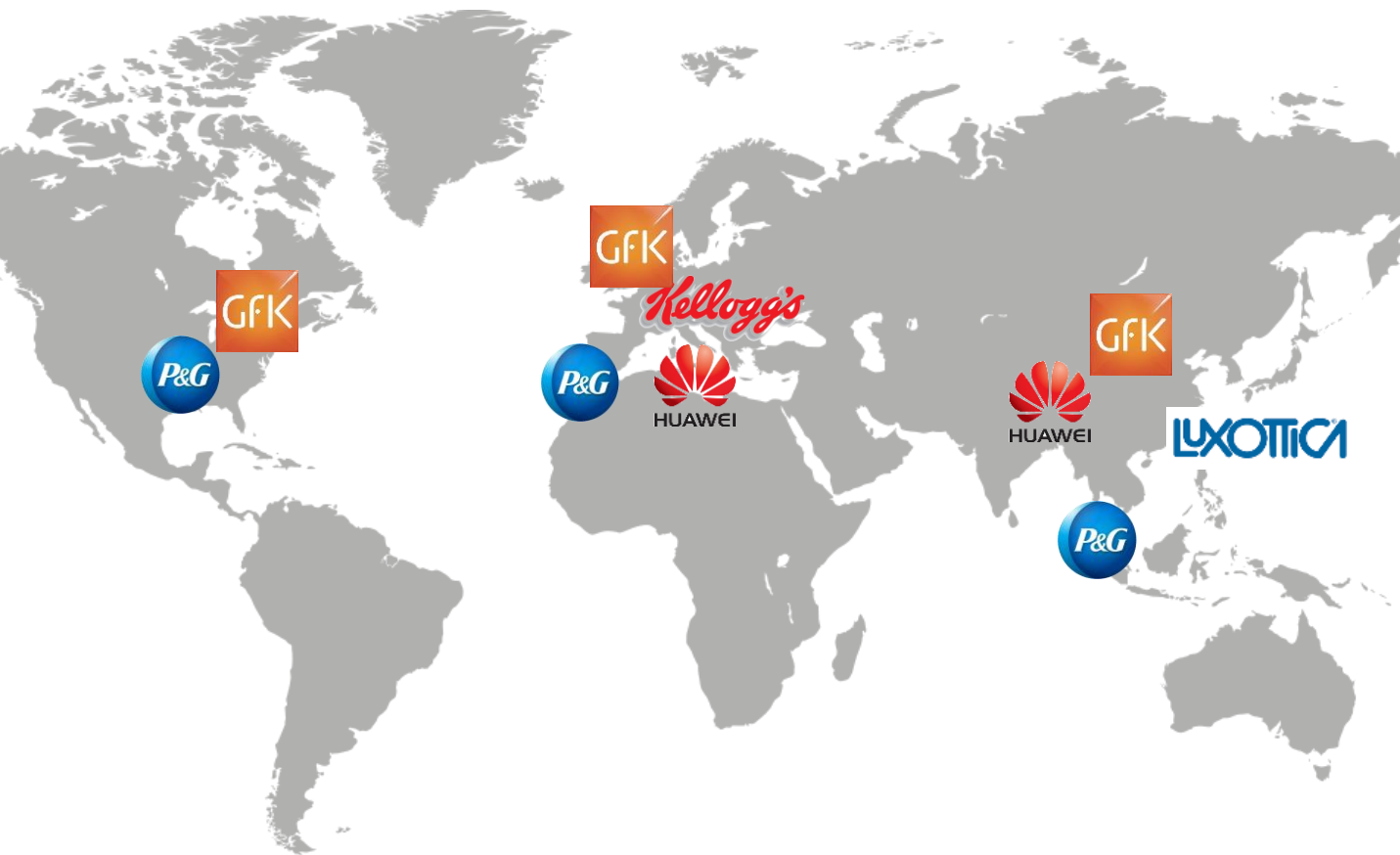
Stay:1

Hand:1



20131007102802987 tlen = 7305 xin = 18 yin = 163 xout = 293 yout = 159

ID shop = 99 ID Cam = 99 ID person = 2 ID
hand = 2 tin = 20131007102817382 tlen =
1075 x = 237 y = 75 z = 1547



Collected Data

2016-2019

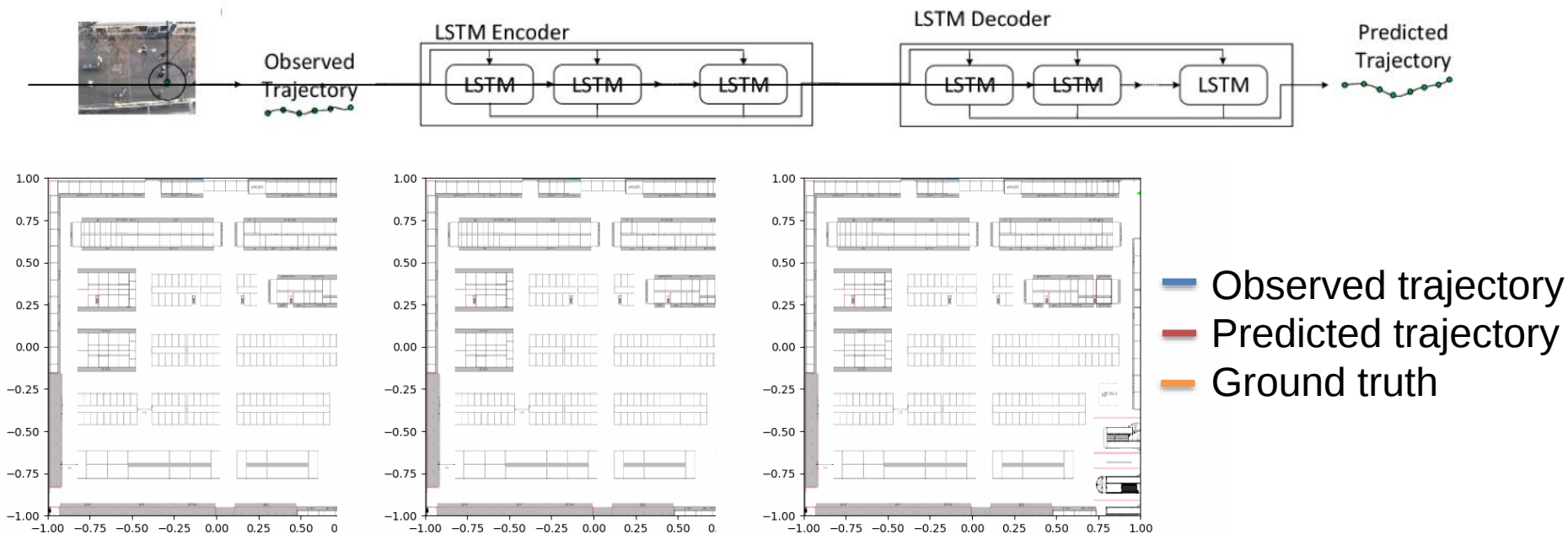
Consumatori

16.323.710

Interazioni

6.104.788

LSTM FOR HUMAN BEHAVIOUR UNDERSTANDING



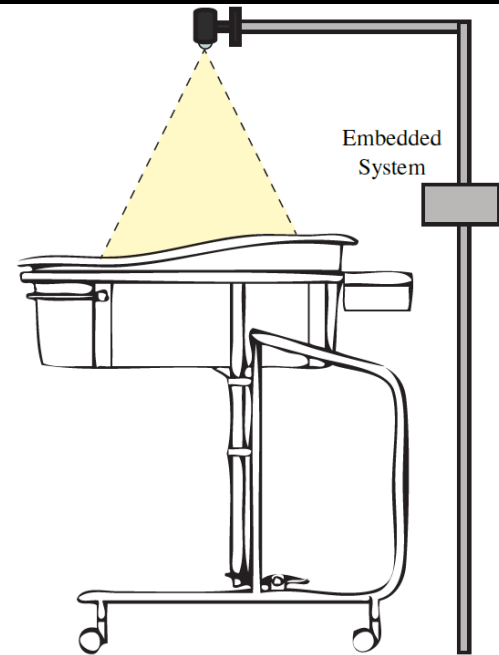
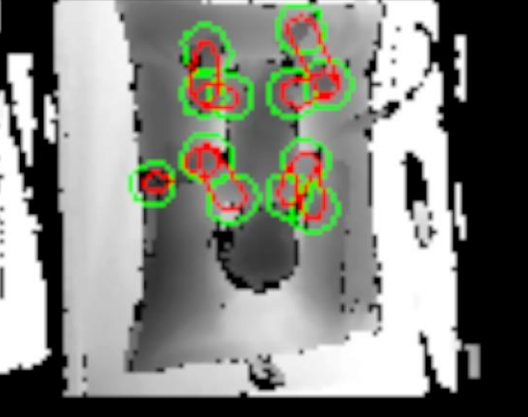
Rossi, L., Paolanti, M., Pierdicca, R., Frontoni, E., Human trajectory prediction and generation in indoor environments using LSTM models and GANs. Pattern Recognition.

STORE SIMULATOR

PROMPT

«Generate 100 consumers per cluster in this store design given the following category placement»



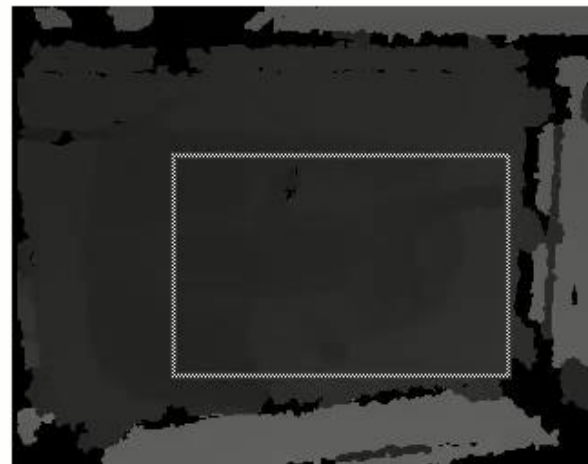


Process

Movements

Database

Config



Depth Value = 0

x = 0

y = 0

Depth stream started...

Sensor Initialized

Select the Points in the depth image ...

Select ROI ...

Screenshot

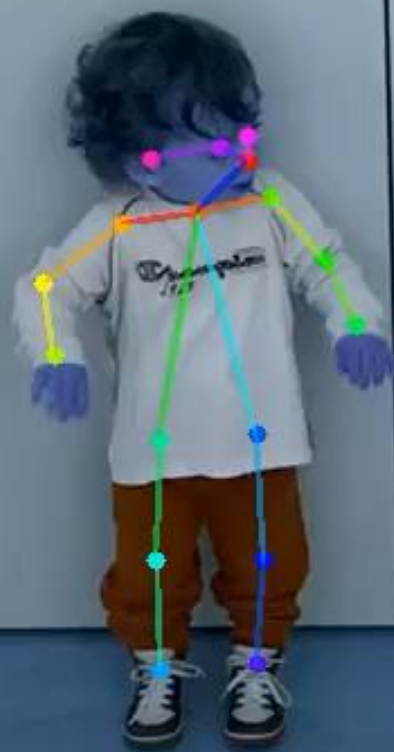
New Background

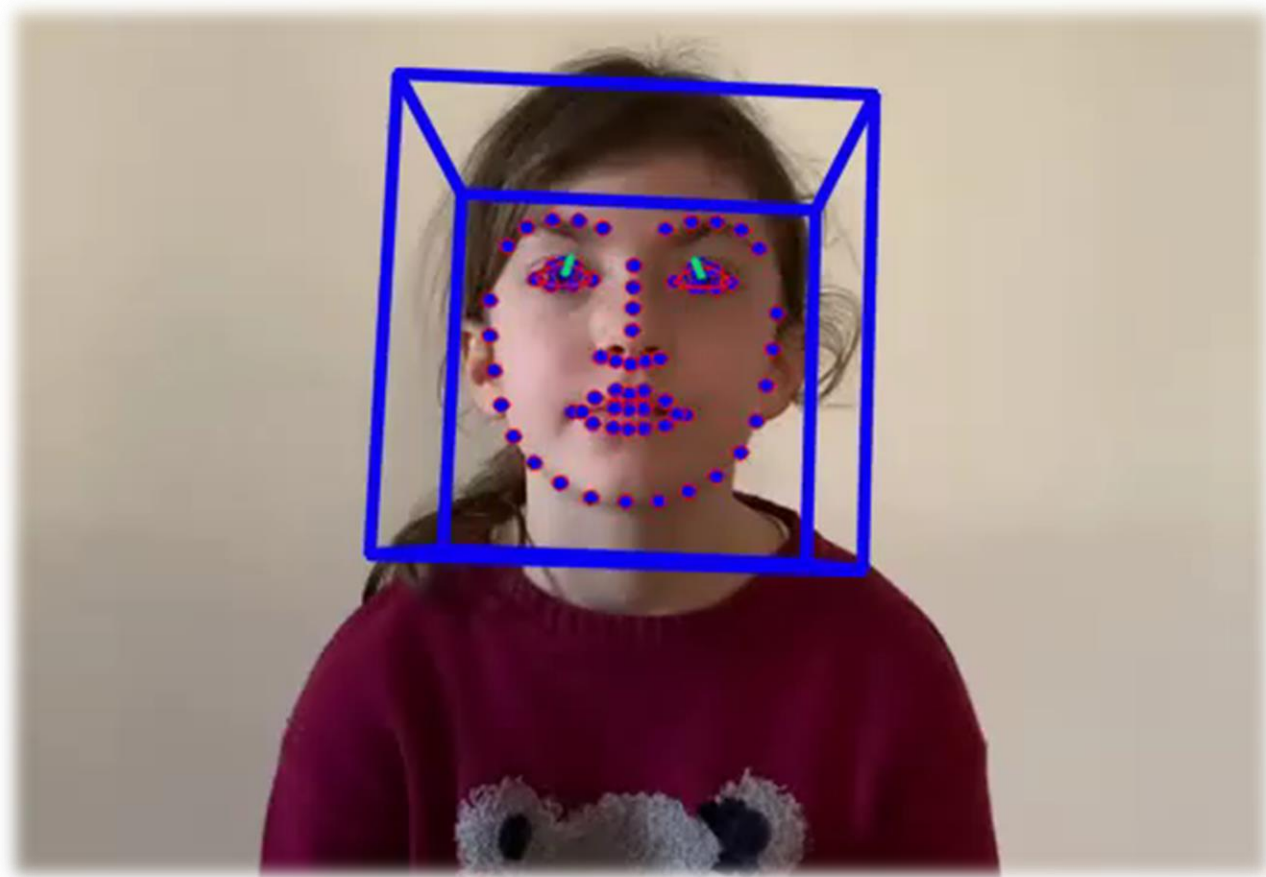
☐ Recorder Mode

Continue

Stop

Exit

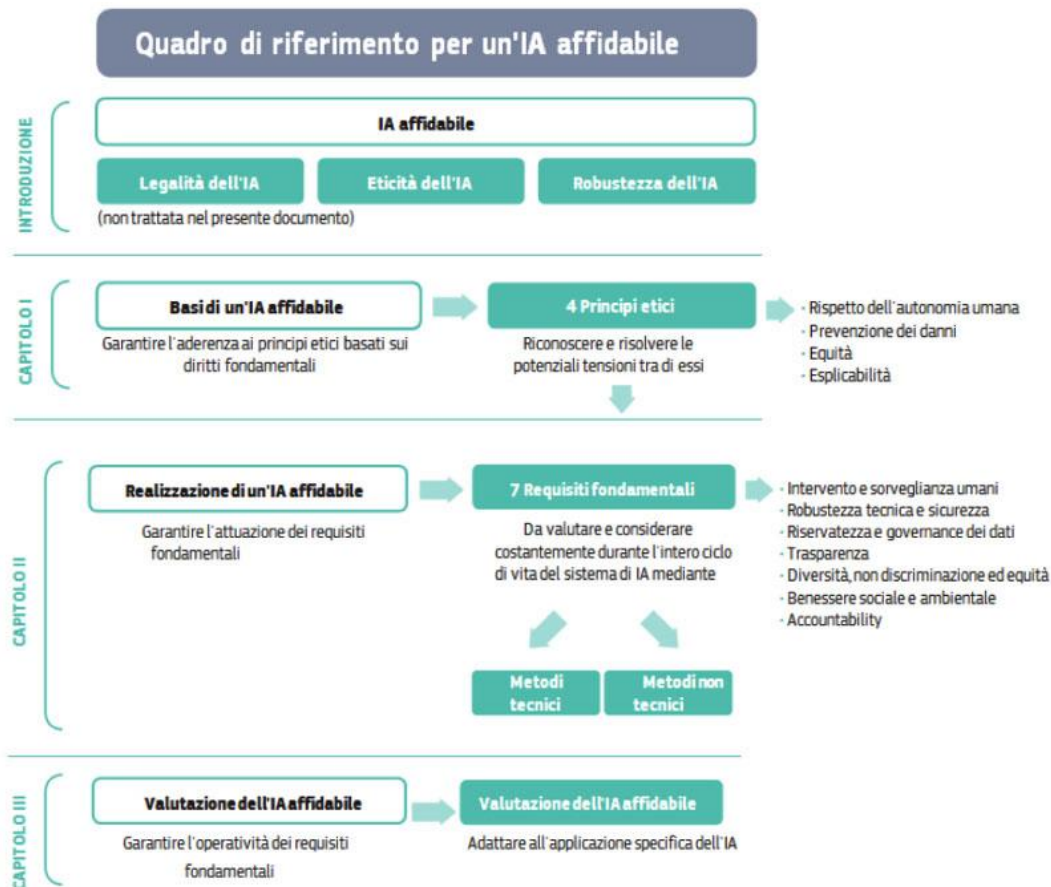




PREMIUM EDITION



AI & ETICA



Voice
for Purpose.

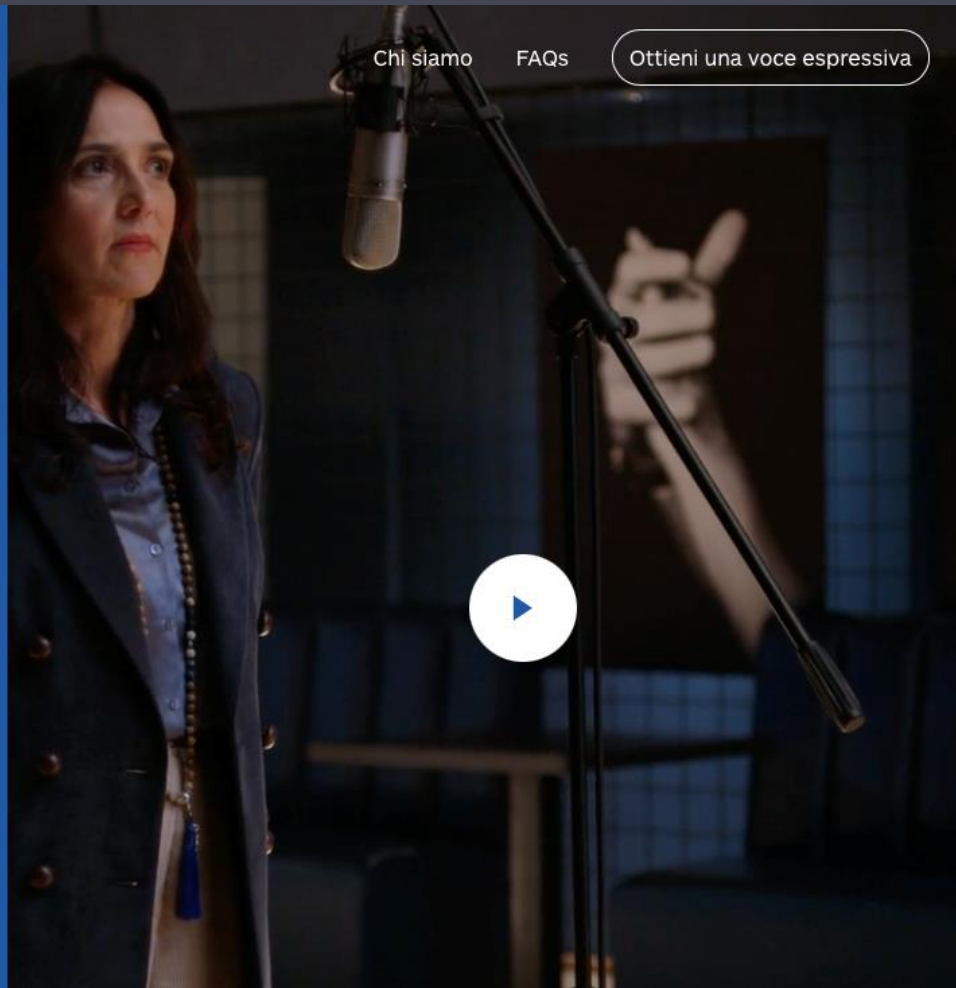
Un consorzio globale
per restituire voci
umane ed espressive
a chi è costretto a
usare sintetizzatori
vocali

[Dona la tua voce](#)

[Chi siamo](#)

[FAQs](#)

[Ottieni una voce espressiva](#)



A stage setup featuring a central projector screen displaying Italian text. In front of the screen is a microphone on a stand. The stage is flanked by two side lamps and has a wooden staircase leading up to the screen.

Non c'è niente di più prezioso
della nostra voce.