

“IL FUTURO PARTE DA QUI” – REGIONE CALABRIA

Intelligenza artificiale al servizio delle nuove emergenze globali.



“AI-based *CONTENT DISCRIMINATOR* vs *MISINFORMATION*”

Andrea Simeri





SUSTAINABLE DEVELOPMENT GOALS



AGENDA 2030

EXPO DUBAI 2020

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



Conflict, insecurity, weak institutions and limited access to justice remain a great threat to sustainable development.

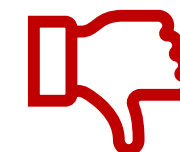
Among the objectives of the sixteenth SGDs:

- **(16.10) Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.**

The information world changed when WEB 2.0 was introduced.
Everyone can produce information. Everyone can consume information.



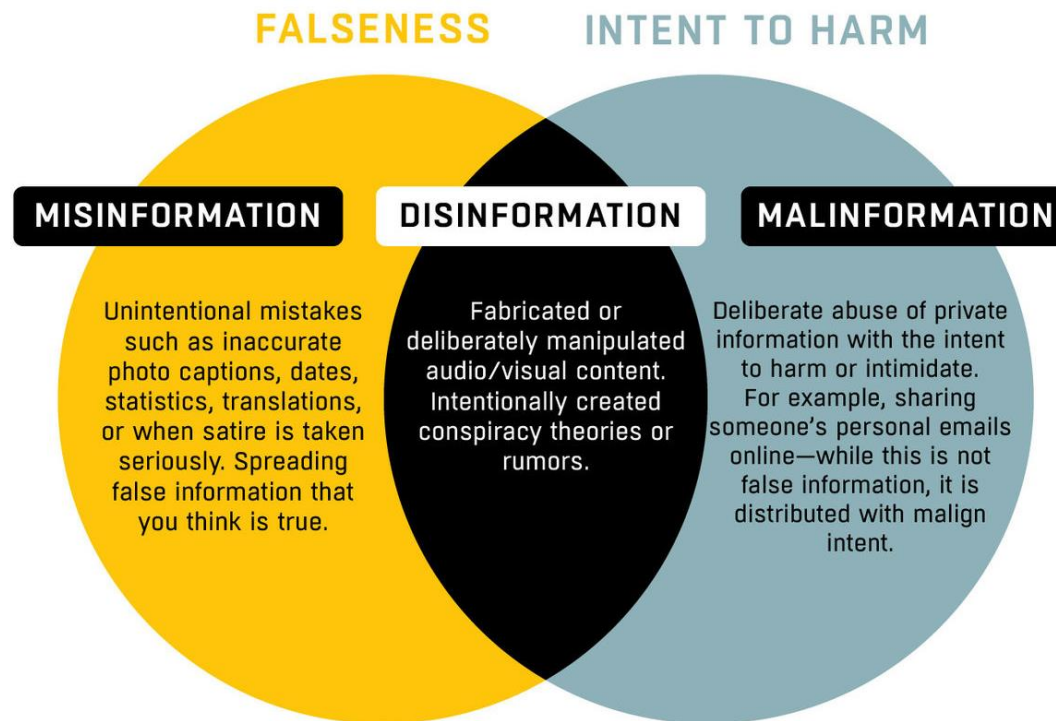
This is still good news as long as it
is actual information.



But it is risky if it is:

- Misleading;
- Inaccurate;
- False.

PROBLEM



MISINFORMATION:

False information that is spread, regardless of intent of mislead. They are not attributed to any particular source and so are unreliable and often unverified.

DISINFORMATION:

Deliberately misleading or biased information; manipulated narrative or facts; propaganda.

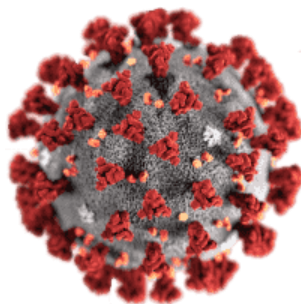
MALINFORMATION:

Deliberate publication of private information for personal or corporate rather than public interest, such as revenge porn. Deliberate change of context, date or time of genuine content.

PROBLEM

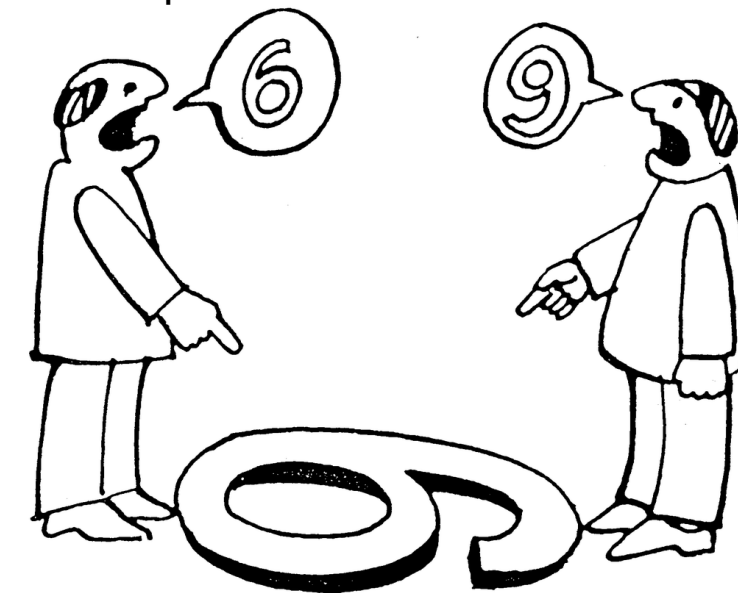
- Wrong information about COVID pandemic crisis cause:

- Deaths;
- Chaos;
- Panic;
- Mistrust of the institutions.



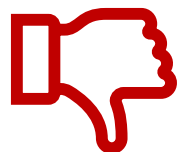
- Manipulated information to promote their own interests cause:

- Conflicts;
- Bad decisions;
- Radicalization.



SOLUTION: USE CASE

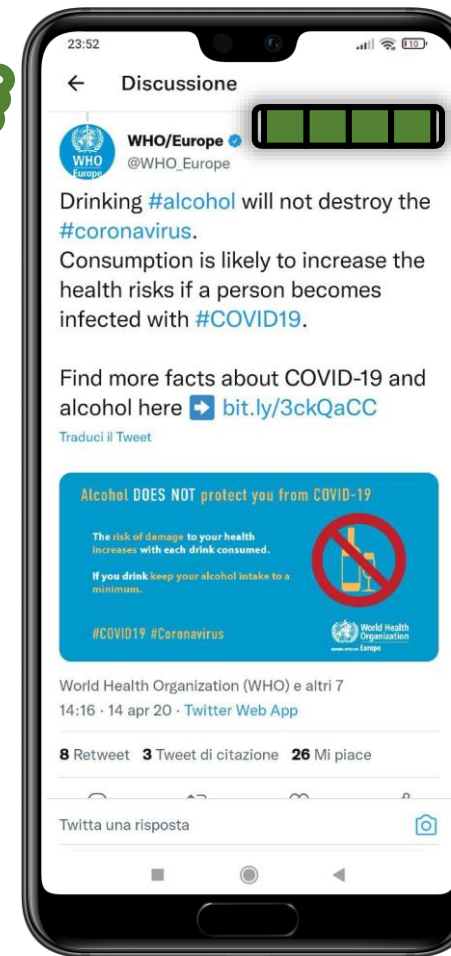
MISINFORMATION DETECTED



- It is not a trusted source;
- Its semantic meaning is not in agreement with similar articles published by trusted sources;

Low level of reliability

RELIABLE INFORMATION



- It is a trusted source

High level of reliability

SOLUTION

Informative Content to verify

Yellow pages of Trusted sources



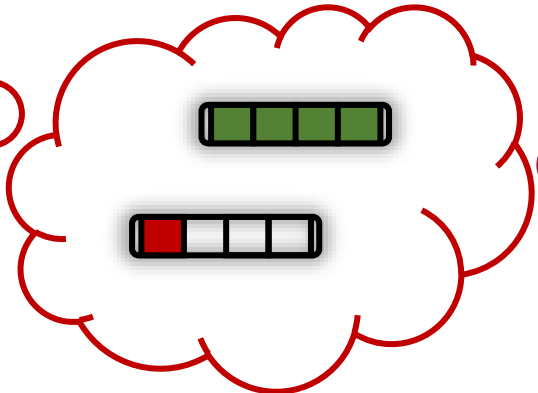
How semantically equivalent are they



AI-based CONTENT DISCRIMINATOR



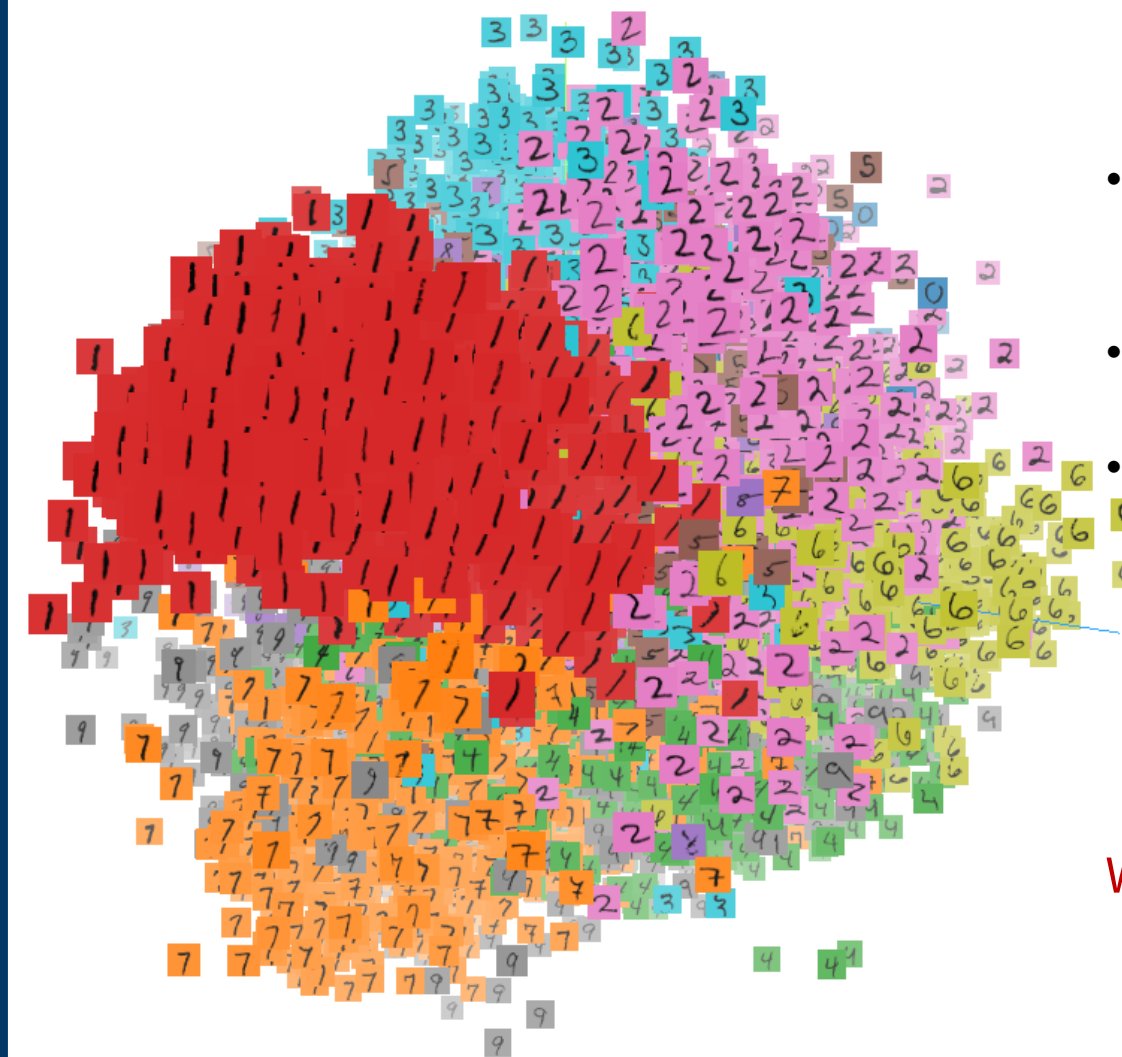
- CONTENT DISCRIMINATOR:
- Is not lexical equivalence based;
 - Is not keyword-based;



% of **RELIABILITY**

We don't use a two-way (yes or no) logic because we condemn censorship.

But what does “semantically equivalent” mean?

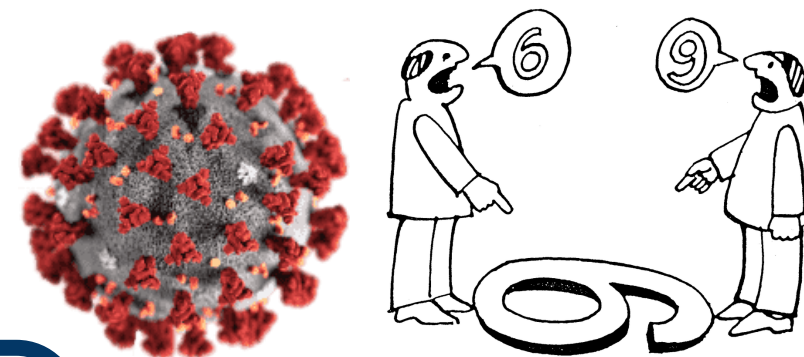


- Each numbered square represents a single informative content in the space;
- It works like a system of spatial coordinates;
- This representation leverages on the following properties:
 - Two near points represent two semantically similar content;
 - Two distant points represent two content which have different meanings.

We can compute the distance to a verified news!

Artificial Intelligence, in particular NLP can do it!

AI-based Content Discriminator vs MISINFORMATION



- Computer Engineer
- PhD student in ICT
- AI, DL and NLP

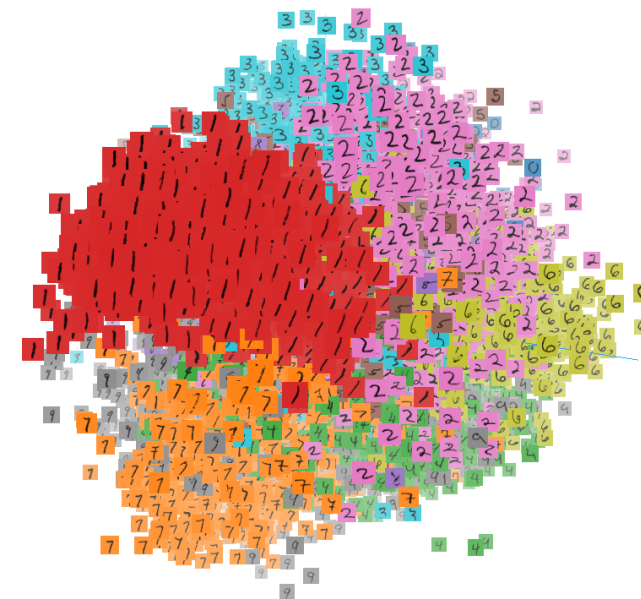
 UNIVERSITÀ DELLA CALABRIA
DIPARTIMENTO DI
INGEGNERIA INFORMATICA,
MODELLISTICA, ELETTRONICA
E SISTEMISTICA
DIMES



andrea.simeri.kr@gmail.com



<https://www.linkedin.com/in/andrea-simeri>





THANKS FOR THE ATTENTION.