

Seminario Regionale eTwinning Piemonte
17 novembre 2021

“WHAT to teach or HOW to teach?
eTwinning è la risposta!”

Deepfakes and how to spot them

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What is Artificial Intelligence (AI)?

Artificial Intelligence



Any technique that enables computers to mimic human intelligence. It includes *machine learning*

Machine Learning



A subset of AI that includes techniques that enable machines to improve at tasks with experience. It includes *deep learning*

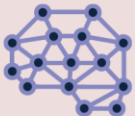



Deep Learning



A subset of machine learning based on neural networks that permit a machine to train itself to perform a task.

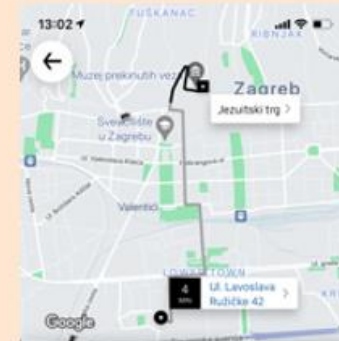
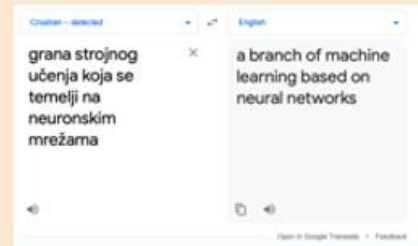
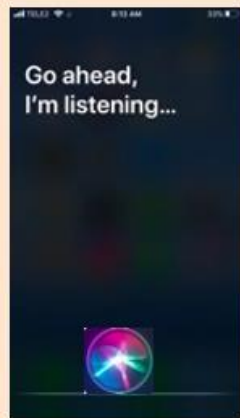
What is Artificial Intelligence (AI)?

THREE TYPES OF AI

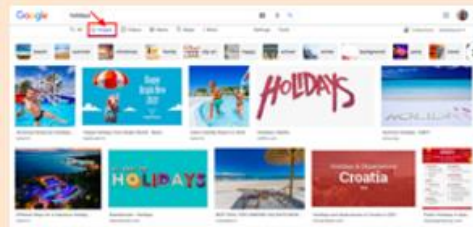
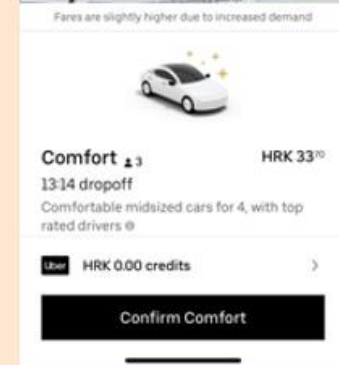
<h3 style="text-align: center; margin: 0;">NARROW AI</h3> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center; color: #003366; font-weight: bold;">can perform one or few specific tasks</p> <p style="text-align: center; color: #4caf50; font-weight: bold;">exists today</p> <div style="text-align: center; margin-top: 10px;">  </div>	<h3 style="text-align: center; margin: 0;">GENERAL AI</h3> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center; color: #003366; font-weight: bold;">similar to human intelligence</p> <p style="text-align: center; color: #f44336; font-weight: bold;">doesn't exist</p>	<h3 style="text-align: center; margin: 0;">SUPER AI</h3> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center; color: #003366; font-weight: bold;">self-aware, exceeds human intelligence</p> <p style="text-align: center; color: #f44336; font-weight: bold;">doesn't exist</p>
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#AIBASICSFORSCHOOLS

AI in everyday life



Are the auto-complete suggestions above helpful? Yes No



DEEPPFAKES = The dark side of AI

WHAT?

Artificial images, videos, sounds, text
- Synthetic media

HOW?

AI tools and technologies – simple and easily accessible

WHO?

Cybercriminals
Manipulators
Pranksters

WHY?

To spread misinformation
To influence people into believing something happened that didn't
To hurt people

The purpose of deepfakes

Election
manipulation

Hoaxes

Reputation
smearing

Social
engineering

Financial fraud

Blackmail

Celebrity
pornography

Phishing scams

Data breaches

Automated
disinformation attacks

Identity theft

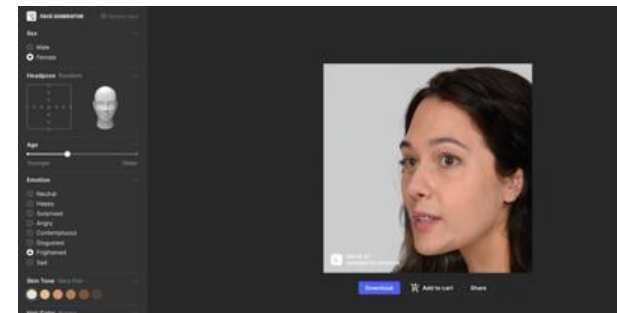
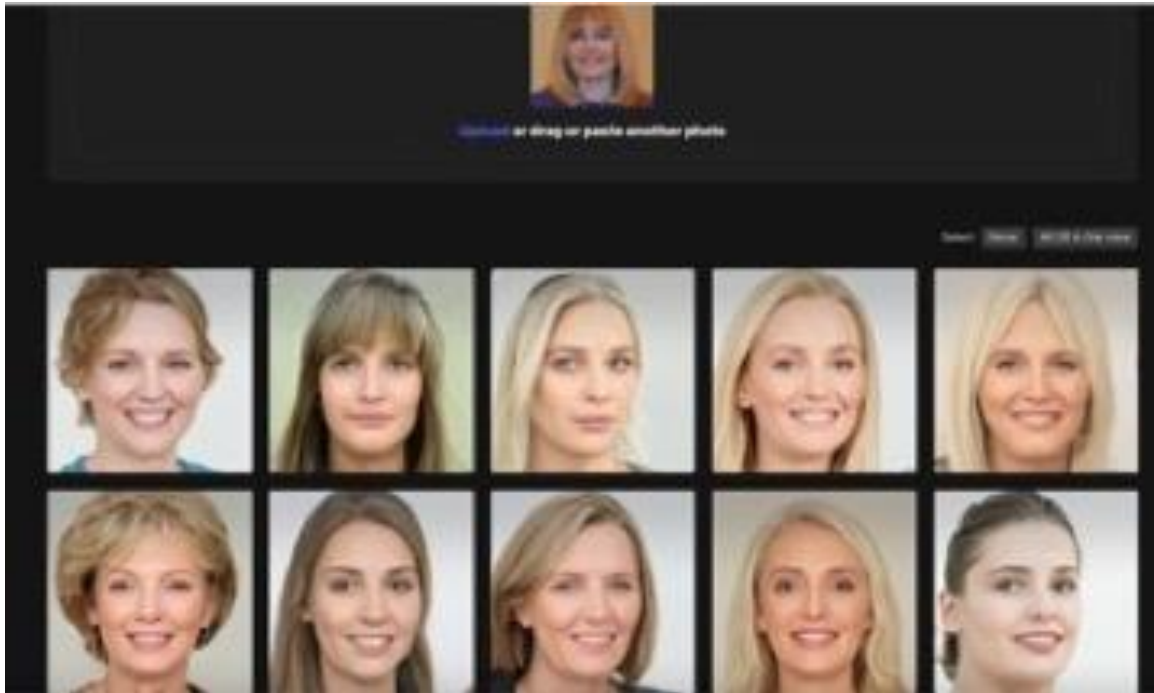
Seeing is no longer believing



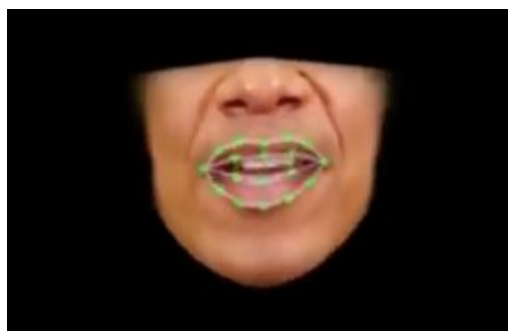
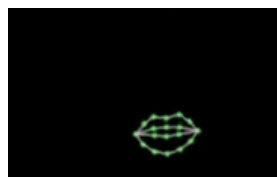
<https://thispersondoesnotexist.com>

GAN - Generative Adversarial Network

Seeing is no longer believing



Watching is no longer believing



A SIMPLE EXAMPLE

Hearing is no longer believing



Download File

Reading is no longer believing



Before boarding your rocket to Mars, remember to pack these items with your first parachute, but you will need a parachute booster or parachute pad in your pocket to hold your parachute in place. For those that need a parachute pad, this is not necessary.

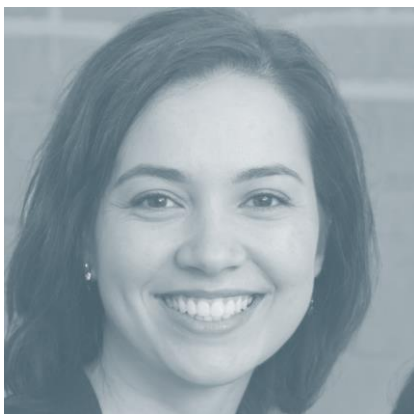
A parachute pad consists of four segments: a short end that attaches a...

The rocket itself can only fly one flight, and the parachute can only fly...

The best thing you can do is get a reusable parachute in your pocket.

HOW TO SPOT DEEPFAKES

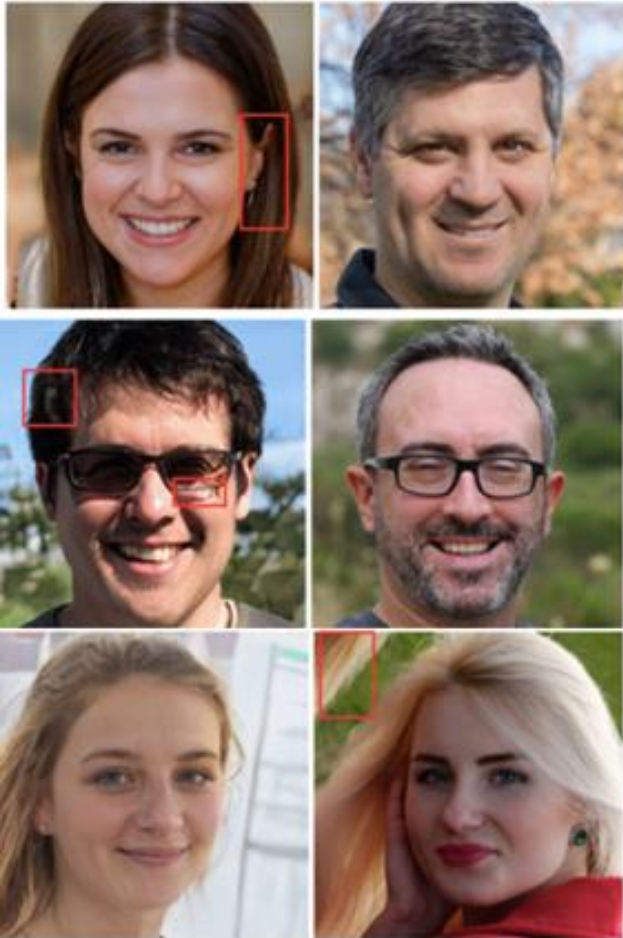
**CREATING
DEEPFAKES**



**FIGHTING
DEEPFAKES**

Don't blink
Smile

Which face is real?



Water splashes
Background problems
Eyeglasses
Asymmetries
Hair
Fluorescent bleed
Teeth

How to spot deepfake videos



<https://detectfakes.media.mit.edu/>

Quiz: Spot deepfakes

What is a deepfake, anyway? ?

A deepfake is a photo, video, or audio track created using artificial intelligence techniques to realistically simulate or alter people's faces, movements, and voices, among other simulations. Where else do you think you have you seen deepfakes before? Check all that apply.

- Movies
- Voice assistance (such as Siri or Alexa)
- Social media filters (like on Snapchat or Instagram)
- I don't think I have ever seen them before

SUBMIT

Your deepfake journey Start ○ × × × × × × × End

www.spotdeepfakes.org

How to teach students to spot deepfakes?



Not everything is fake!

Can we trust the media?

Can we believe what we see, hear, read?

Understand what AI is and how it operates.

Raise awareness of the risks of AI.

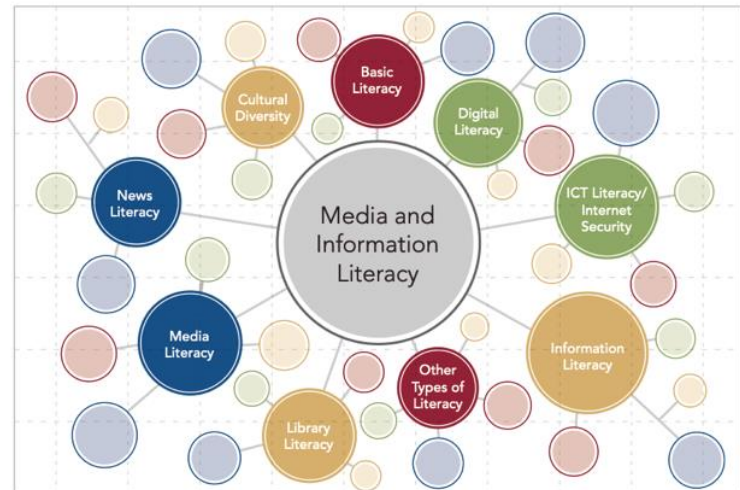
**Develop a capacity to deal with ambiguity and
use critical thinking to make judgements.**



Media and information literacy

A SET OF COMPETENCIES

- access, have a **critical understanding**, evaluate, create, share and interact with information and media content in all formats
- use various tools in a **critical, ethical and effective** way
- and **make informed decisions**.



SOURCE: UNESCO



Teaching critical digital literacy

This year's eTwinning theme

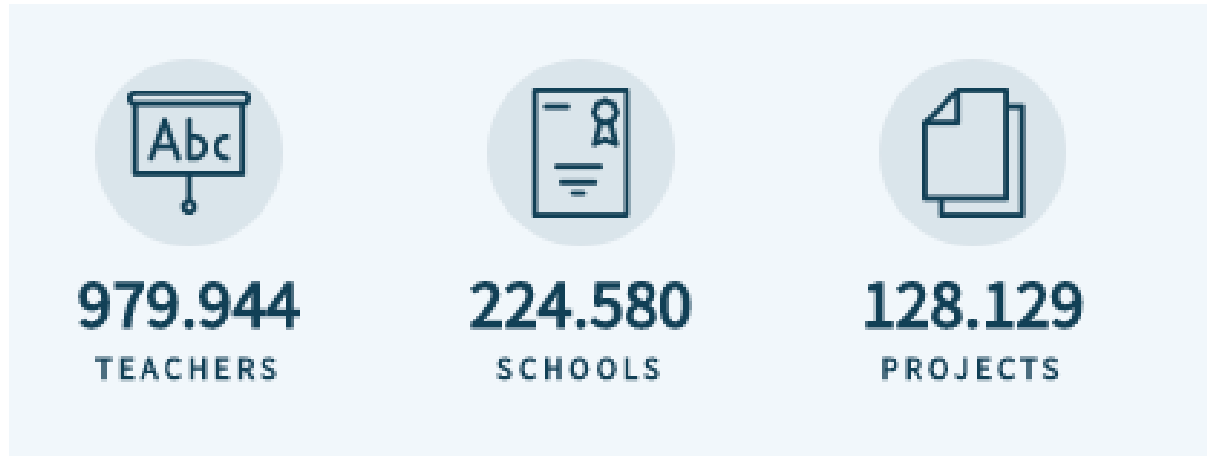
“Teaching Media Literacy and fighting Disinformation with eTwinning”

Equip eTwinning teachers with digital skills

INTEGRAL PART OF ETWINNING



How can eTwinning help?

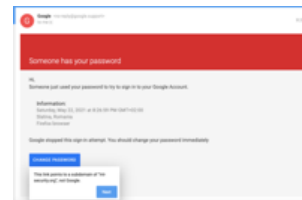
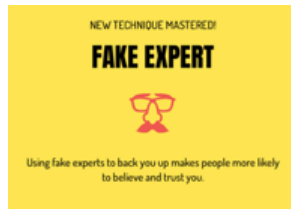
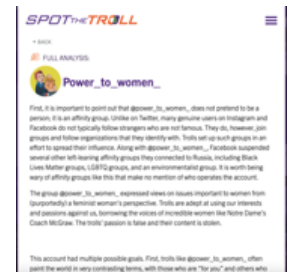
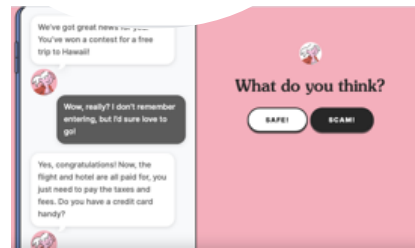
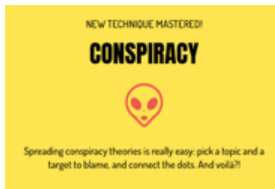


If only 10% of eTwinning teachers educated 10 pupils each in media literacy – the reach would be 9 million pupils!

Anne Gilleran, 2021



Some practical activities for students (and teachers)





Thank you!

Arjana Blazic
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