

Using technology to address misinformation

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Why the focus on misinformation?

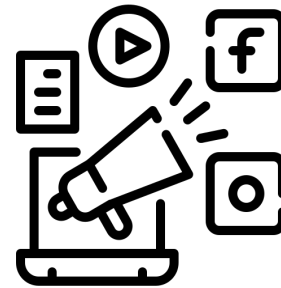
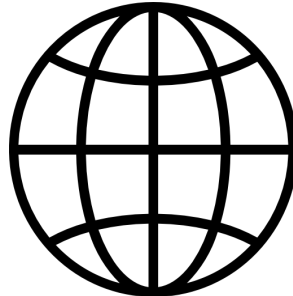
- Day-to-day, scale and speed of false information on social media increasingly problematic
- Black swan events like the Covid-19 pandemic exacerbates existing issues

Artificial intelligence and machine learning

- Understanding the information environment
- Scale up existing counter efforts

Part 1: History

Misinformation in selected periods



Pre-internet

- Yellow journalism
- Poison pen letters

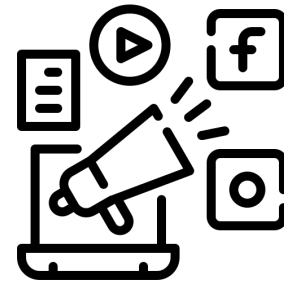
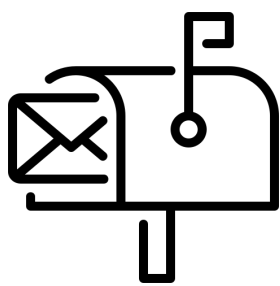
Early internet

- Websites
- Blogs

Social media

- User-generated content
- Troll content
- Disinformation/influence campaigns

Scale and spread increasing over time



Pre-internet

- Spread limited by physical considerations

Early internet

- Relatively contained, scale depended on awareness of websites/blogs to access

Social media

- Spreading like never before, due to scale and speed

What have/are we doing to solve the problem



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Legislations

- Punitive for creators
- Regulation for platforms

Fact-checking

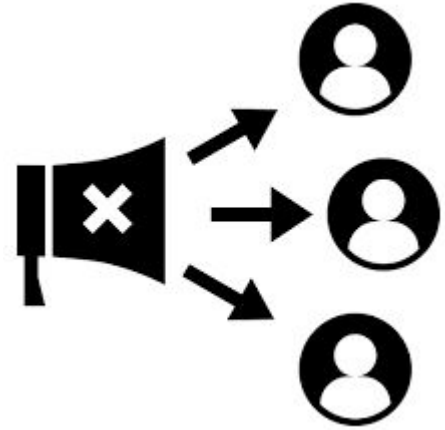
- Debunking
- Prebunking

Digital literacy

- Education campaigns

Part 2: How smart technology solve the problem.

1. Where does fake news come from?
2. Who create them?
3. Which things are used to create them?



Can Laws and regulations control the negative impact of technology?

Yes

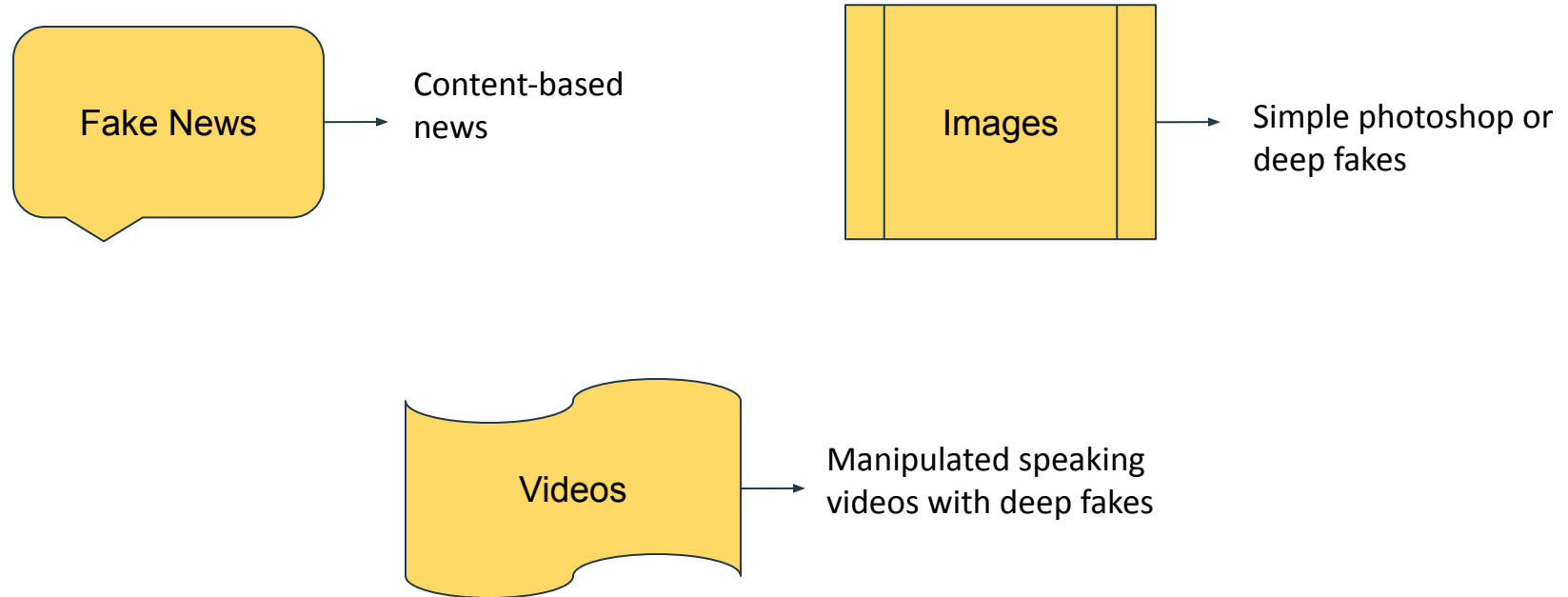
No

What can we do about these technology?

Government needs to define

- Who should use them
- In what conditions
- What is the accountability and (police) entrapment

Things that Lead to Misinformation



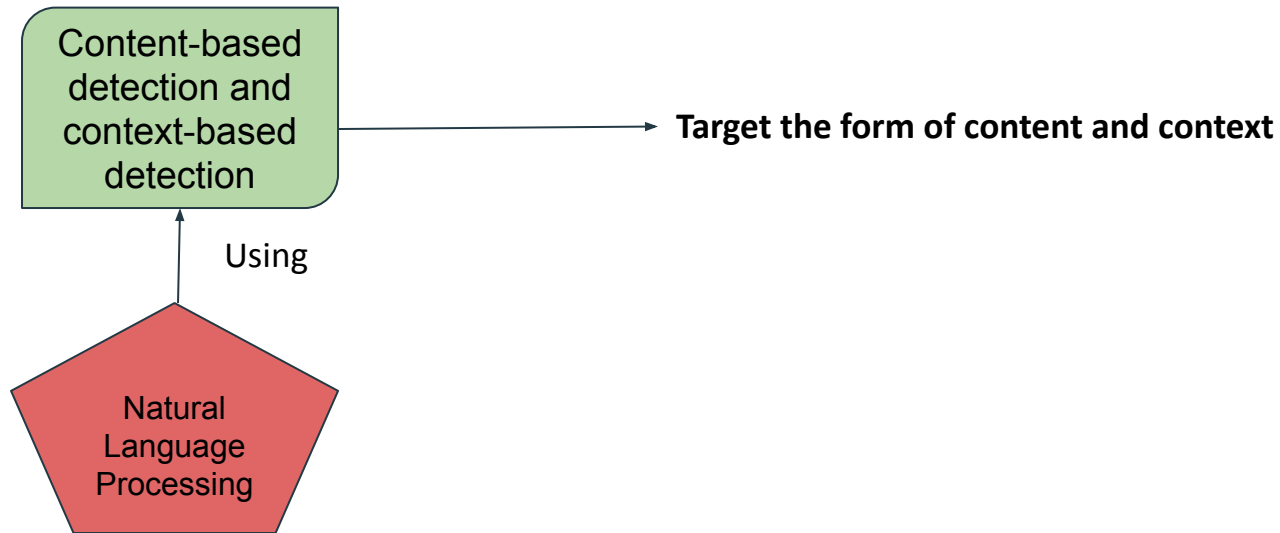


“Fake news is not a mathematical question of algorithms and data, but a very philosophical of how we deal with the truth.”

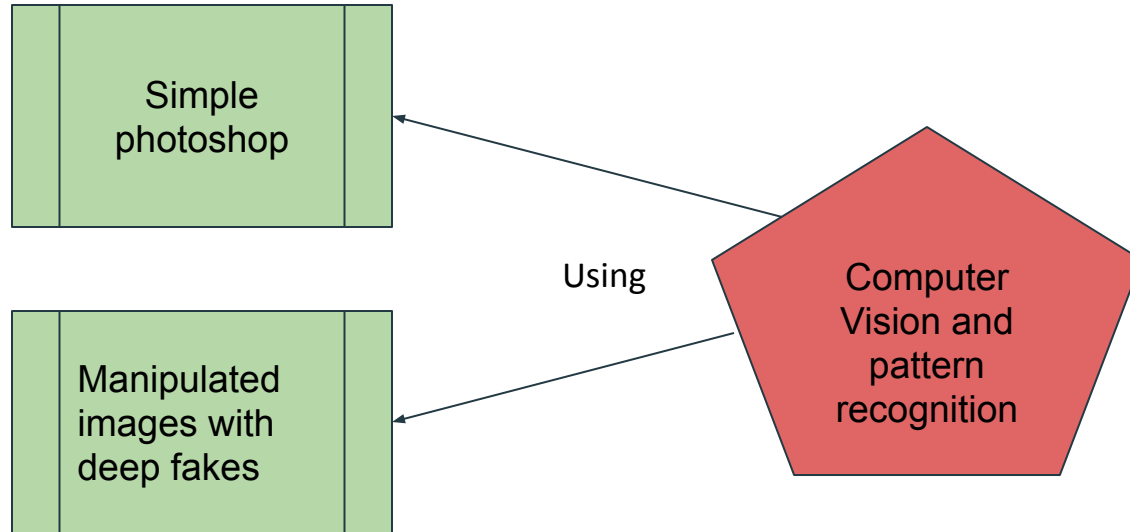
Francesco Nucci, Engineering Group, Italy

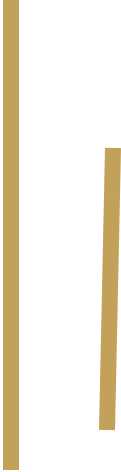
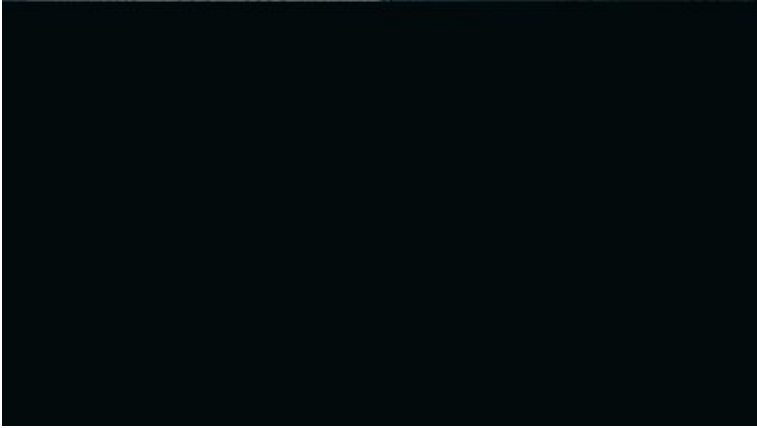
Detection of Content-based Fake news

What smart technology will you use?



Detection of manipulated Images



Two vertical bars of different heights and widths, colored in a light tan or gold shade, positioned on the left side of the slide.A large, solid black rectangular area in the top right corner of the slide, likely used to redact sensitive information.

“The issue of deepfakes is an important and difficult one. Like many other types of harmful content, it is adversarial in nature and will continue to evolve and no single organization can solve these challenges on its own.”

Meta AI team (June 12, 2020)

Manipulated speaking videos with deep fakes



We need to do research to get more models with better accuracy for detecting deep fakes.

You can download Deepfake detection dataset [here](#) provided by *Meta AI*.

Part 3: Impact of the technology on society

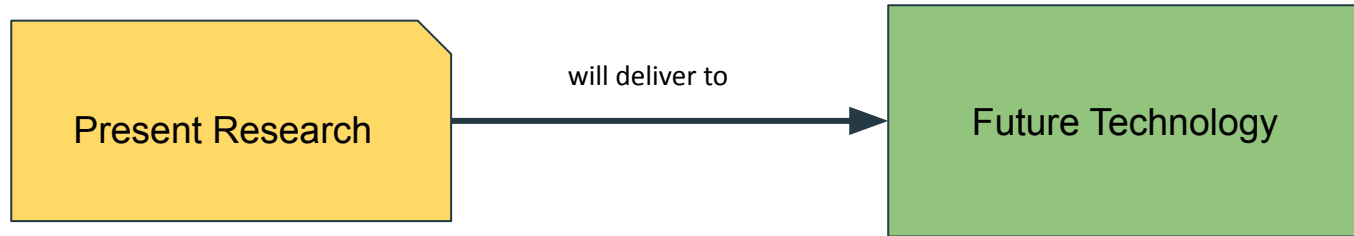
Impact of the technology on society:

- The proverbial genie is already out of the bottle which means that society will need to respond accordingly
- Social media has increased the scale and speed of misinformation with billions of user generated content being posted online every day
- For any response to stand a chance at succeeding, it will have to match this scale and speed by leveraging on technology
- Amendments of the laws and regulations are essential because of the innovation of AI and Machine Learning technology in fact checking process and digital literacy
- Less people will fall for scams because the AI technology has the ability to filter suspicious transactions

Impact of the technology on society:

- Users are becoming more cautious in everything they see online with the use AI and Machine Learning technology in verifying the contents on the internet
- Learning institutions are changing their curriculum to fit the demands of AI and Machine Learning technology
- Mass media will experience surge of information and they will be more meticulous which content they should publish because the public has the opportunity to verify the information

Future of the technology



There are more and more technologies . . .

AI image generation

Brain Reading Robots

Car batteries that charge in 10 minutes

3D printed bones

Hydrogen planes

Realistic holographs

Drown forest fires in sound

Digital “twins” that track you health

Green funerals

Clothes that can hear

Artificial eyes

Internet for everyone

Lab made dairy products

Artificial neurons on silicon chips

Airports for drones and flying taxis

Direct air capture

Virtual reality universes

Self-healing “Living concrete”

Energy storing bricks

Sweat powered smart watches

Living robots

Floating farms



The future is
yours

and **mine** too



Thank You

