AI for Information

How can AI help achieve sustainability in information environments?

Perform AI

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As Thomas Jefferson said, "Information is the currency of democracy". Today, this quote has quite a literal meaning: Both the direct and indirect annual monetary damage caused by websites that propagate false information **are estimated to** globally mount up to 78 billion USD.[1] This shows how crucial information has become to sustainable economic growth and development and how damaging its financial, leave alone its societal impact, can be.

The spread of and access to valid information is the base for peaceful and inclusive societies. Artificial Intelligence is already being used to combat disinformation extensively today in order to keep society informed, educated and protected.

#AI4INFO

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

4 QUALITY EDUCATION

#AIVSFAKENEWS

About SDGs

The Sustainable Development Goals (SDGs) are at the heart of the 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015. They consist of 17 interlinked global goals that must go hand in hand with strategies in order to create a better and more sustainable future. SDG 4 and SDG 16 address the main objectives that are linked to AI and information.

You can learn more about the SDGs here.

79%

of the SGDs targets could be positively impacted by AI.[2]

National strategic approaches in AI for Information

Several countries are embracing AI´s potential to fight the spread of fake news and build healthy information environments in their AI strategies:

Italy - Raising awareness regarding misuse of information[3]

Italy's investment in AI has increased and its national AI strategy is aligned to the one proposed by the EU. The dissemination and uptake of AI technologies will be fostered through **promotional campaigns to raise awareness on fake news and Cyber Security**.

European Union - Finding the balance between regulation and pluralism[4]

In 2019, the European Parliamentary Research Service presented **policy options for regulating AI in disinformation**, including co-regulation, self-regulation, technical standards and initiatives. Particular attention is paid to interactions between technological solutions, freedom of expression and media pluralism.
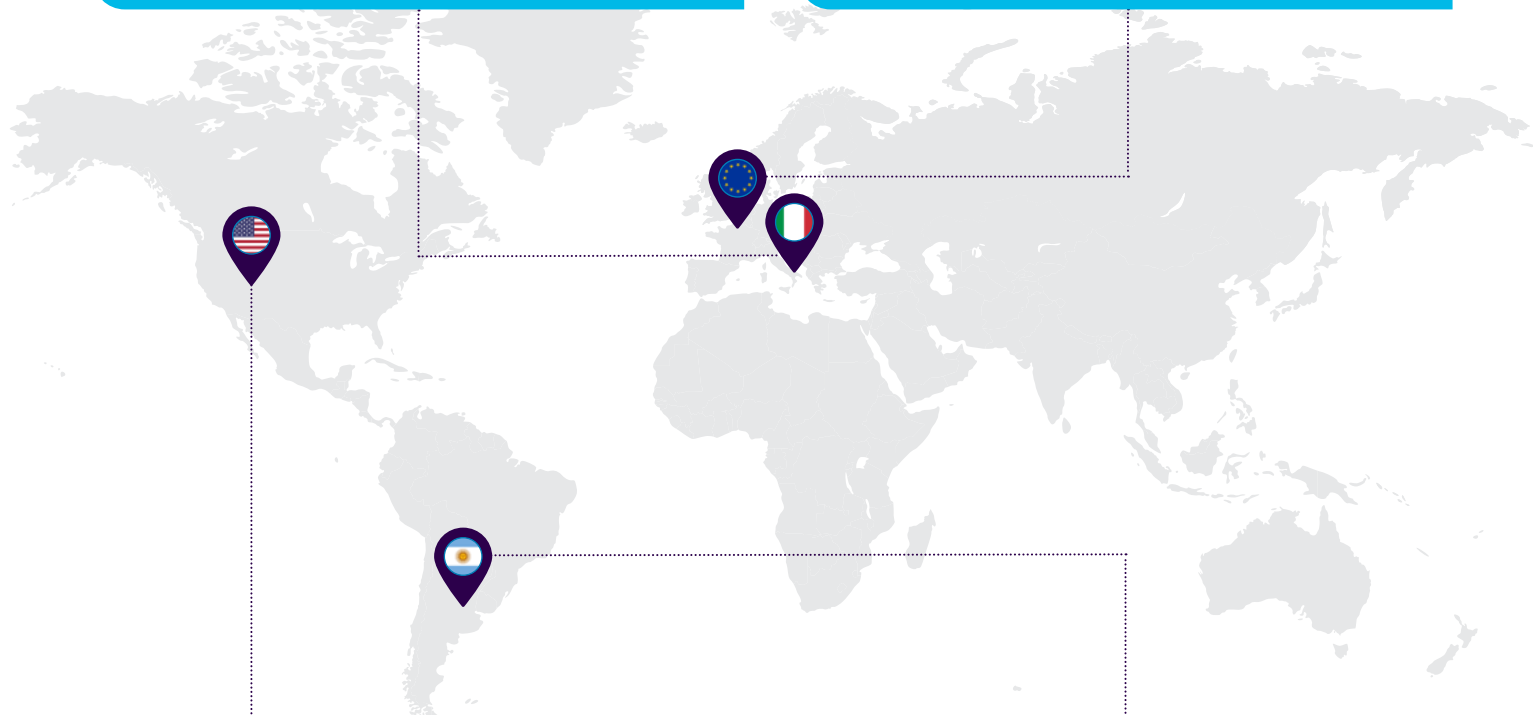
USA - Detecting manipulations and their performance[5]

DARPA has launched the **MediFor (Media Forensics) project** that seeks to "automatically detect manipulations, provide detailed information about how these manipulations were performed, and reason about the overall integrity of visual media".

Argentina – Verifying public discourse[6]

Chequeado is a project that started in 2010 and is part of La Voz Pública Foundation, an NGO set up for verification of public discourse with fact-checking AI. Their goal is to improve public debate in Argentina through **fact-checking and education**, often **collaborating with UN organizations**.

92%

of neural fake news can be successfully detected compared to reliable human-written news with the help of the AI tool Grover, a controllable text generator.[7]

"We are in the era of information, with a big bang [...] of data volumes: It is estimated that the volume of data will be multiplied by 45, between 2020 and 2035 and there is an increasing speed rate at which fake news are spreading."

- Emmanuelle Brodard
Senior Manager for Digital Strategy and Acceleration, Capgemini France

Our Approach

By leveraging automation and analytics skills along Capgemini's PublicGoesAI playgrounds, information environments and their misuse can be approached with AI in several ways:

Identification –
As soon as disinformation is identified, an accurate response can be developed, and its spread can be prevented. AI can identify disinformation even before it spreads virally, for example by analyzing the behavior of social media assets.

Analysis –
An important part of the identification, but also the prevention of fake news dissemination is the analysis of behavior on social media. AI uses data on virality, impact and interactions with an element of disinformation to analyze communities and identify disinformation. This is especially crucial to identifying organized networks, for example in the context of elections or international conflicts.

Dismantling –
Dismantling fake news is probably the biggest part of promoting information accuracy. By directly comparing wrong claims to reliable facts, AI cannot only identify disinformation, but also provide accurate information in time, for example by notifying social media users or delivering virtual assistance with conversational AI. This can prevent the spread of fake news and at least help responding virally.

Capgemini accompanies public institutions, city authorities, governments and ministries in attaining the goal of safe information environments that promotes accuracy. Some of the AI applications in this field are:

- Tracking bots that identify misinformation and fake news to proactively and reactively curb their spreading.
- Algorithmic hate speech and fake news detection.
- Social media analysis and feed optimization.

134%

increase in hate speech removals could be attained through Facebook´s automated detection systems in the second quarter of 2020.[8]

304

fact-checking projects are currently active in 84 countries, having doubled from 2016 to 2020.[9]
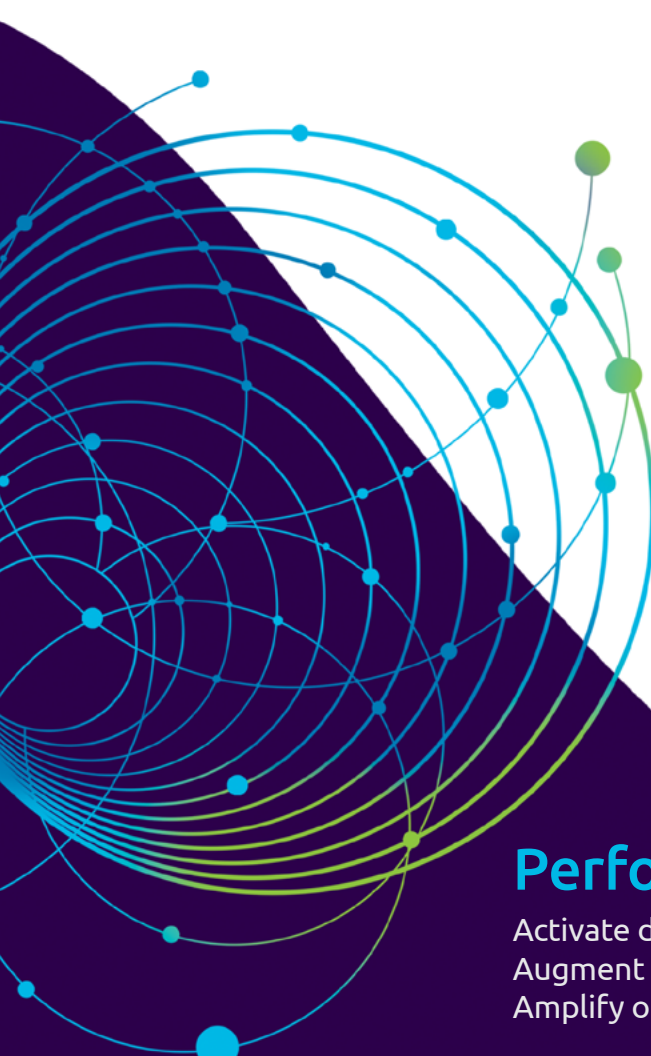
Fake news Analysis for Election
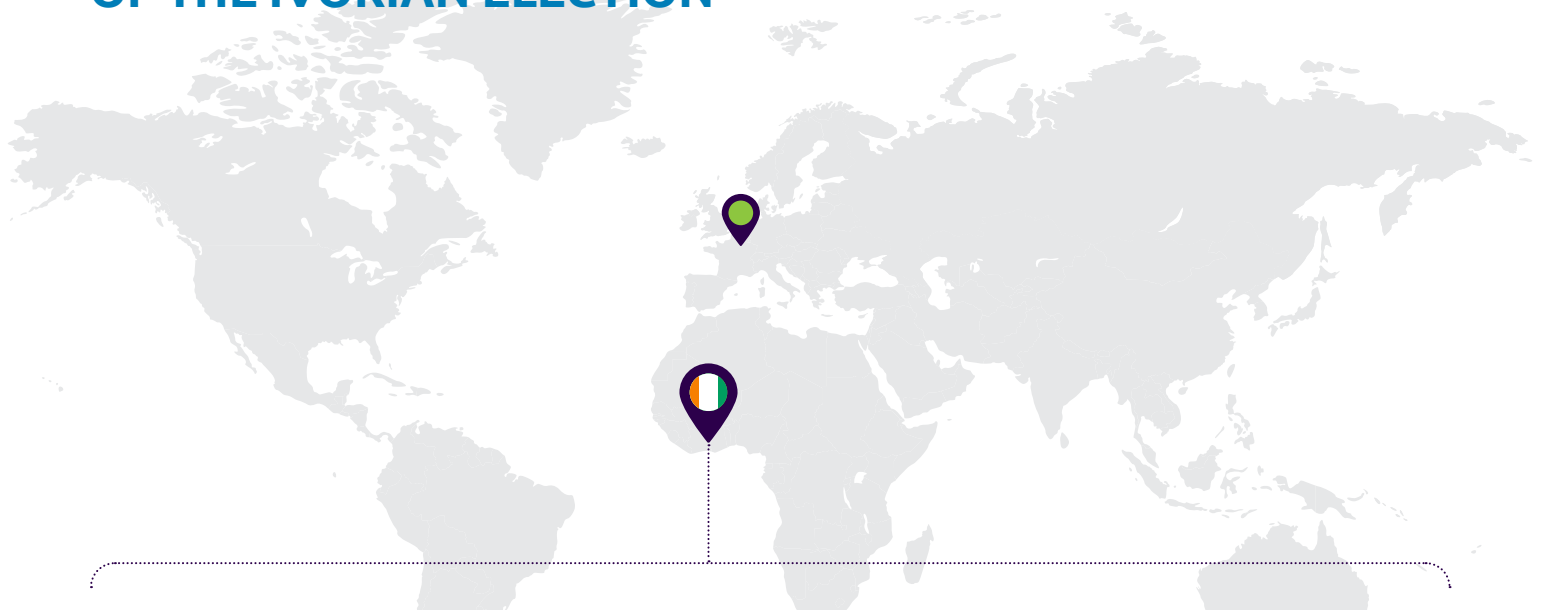
The European Data Portal

Use Cases

Perform AI

Activate data.
Augment intelligence.
Amplify outcomes.

Use Case – SOCIAL MEDIA ANALYTICS IN THE CONTEXT OF THE IVORIAN ELECTION

SOCIAL MEDIA ANALYTICS IN THE CONTEXT OF THE IVORIAN ELECTION
### Bloom, Ivory Coast

Challenges

- Viral dissemination of fake news on social networks is the most dangerous spread of disinformation.
- Fake news can erode trust in government, which can later have major political effects such as riots, e.g. during the elections in Ivory Coast in 2010.
- In order to prevent such events, fake news need to be identified before they spread.

Solutions

- Bloom's solution is based on two innovation pillars: semantic and social inference.
- Semantic inference helps us understand relationships between words to identify and characterize communities. Social inference identifies relationships between actors to analyze communities.
- The social data could be turned into smart data in order to identify viral fake news in advance during the election campaign 2020 in Ivory Coast.
- The early detection of fake news thus helped preventing the spread of disinformation and the emergence of riots.

Use Case – DATA.EUROPA.EU
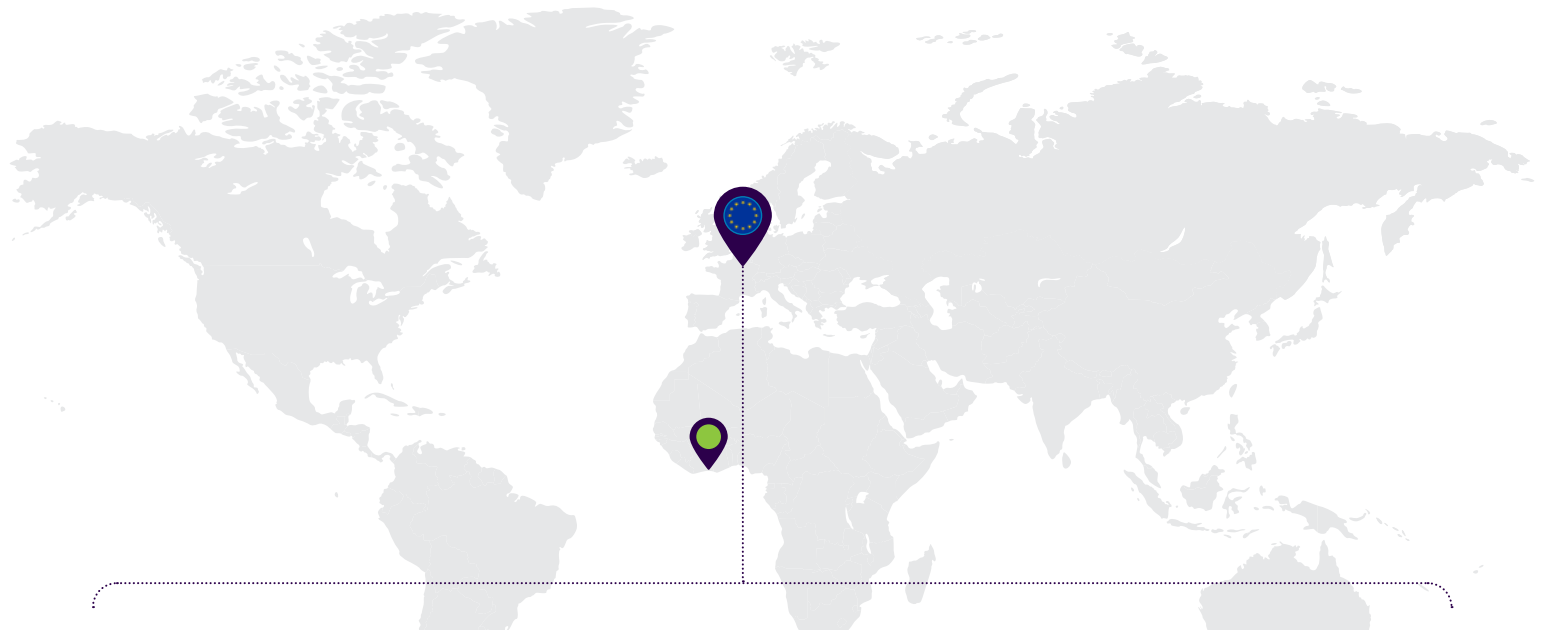
DATA.EUROPA.EU
Previously "European Data Portal", European Union

Challenges

- The first step to combat disinformation and fake news is to create a baseline of facts which derive from data.
- Public data is already collected across the whole of Europe but its full potential is not yet realized.
- This is mainly because data collection is often not standardised to maximise the opportunity for re-use.
- This makes it difficult to access relevant information in time, which is especially crucial in crisis situations.

Solutions

- In 2015, Capgemini Invent published a study[10] for the launch of data.europa.eu[11] by the European Commission.
- The portal makes discoverable all data made available by European institutions, Member States and beyond.
- With AI, the data collected in the portal could be analyzed and used to bring the right information to the right people or authorities.
- In a complex information environment, the portal can communicate specific relevant information to respective units on all levels.

Thought Leadership Positions

Conversations – Towards Ethical AI
2019

The Economic Impact of Open Data
2020

Contact our Experts!

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More Information

Missed the event?
Catch up on all the
individual session
recordings!

Additional links
Our Perform AI Offer
AI in the Public Sector
Capgemini @ AI for Good Summit

References

1. University of Baltimore, CHEQ: „The Economic Cost of bad Actors on the Internet" (2019): https://www.cheq.ai/fakenews

2. Vinuesa, R., Azizpour, H., Leite, I. et al. The role of artificial intelligence in achieving the Sustainable Development Goals. Nat Commun 11, 233 (2020). https://doi.org/10.1038/s41467-019-14108-y

3. Italian Ministry of Economic Development. Proposals for an Italian AI Strategy (2020): https://www.mise.gov.it/images/stories/documenti/Proposte_per_una_Strategia_italiana_AI.pdf

4. European Parliamentary Research Service. Regulating disinformation with artificial intelligence (2019): https://www.europarl.europa.eu/RegData/etudes/STUD/2019/624279/EPRS_STU(2019)624279_EN.pdf

5. Congressional Research Service. Artificial Intelligence and National Security (2020): https://fas.org/sgp/crs/natsec/R45178.pdf

6. Chequeado: https://chequeado.com/

7. Zellers, R., Holtzman, A., Rashkin, H., Bisk, Y., Farhadi, A., Roesner, F., & Choi, Y. (2019). Defending against neural fake news. In Advances in Neural Information Processing Systems (pp. 9054-9065)

8. Fast Company. Mark Sullivan. Facebook´s AI for identifying hate speech seems to be working (12.08.2020): https://www.fastcompany.com/90538941/facebook-ai-for-identifying-hate-speech-seems-to-be-working

9. Duke Reporter´s Lab. Database of Global Fact-Checking Sites: https://reporterslab.org/latest-news/

10. European Commission, Capgemini. Creating Value through Open Data (2015): https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

11. https://www.europeandataportal.eu/en

More information

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Capgemini

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