**Developing the methodology to detect “fake news” from fact-checked articles**

**Module structure**

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| ***TEACHING HOURS*** ***(45 min each)*** | ***TIME NEEDED*** | ***CONTENT &*** ***TEACHER ACTIVITY*** | ***STUDENT ACTIVITY*** | ***RESOURCE / METHOD*** |
| Total teaching hours:4 teaching hours (time needed: 3 hours) |
| 1 teaching hour**Introduction / Social Media: Response to Fake News**  | 15 min | **Introduction**PPT slides 3-6Introducing the module starting with an analysis of the terms “Information Overload”, “Echo Chambers” and “Rise of the Bots”. |  | PPT slides 3-6 |
| *20 min* | **Social Media Response to Fake News: Examples**PPT slides 7-17Presentation of examples on social media response to fake news. For future use of this module the examples can be adapted and updated easily in order to be relevant to the time of the presentation. | Students are encouraged to add to the examples any extra information they have.  | PPT and (in distance learning): presentation of social media response to fake news using examples on the PPT slides |
| 10 min | **Activity: Discussion/Examples**PPT slide 18Introduce the activity and the general questions. Encourage discussion with plenum. Let students present their examples and encourage them to ask questions which will be answered by other students in order to create discussion. Leading questions (if needed) are: - Were you aware of these measures?- Did you came across to any of these measures? What was your reaction? Did it influenced your response to the information?- Are you aware of any other measures?- Do you believe that Social Media companies are doing enough about fake news? | Students should think of 1-2 examples of fake news they’ve encountered recently on social media and whether there was a notification/label or any other measure of precaution from the social media organisation. The leading questions will be discussed in the frame of the examples.Open discussion between the students monitored by the lecturer. | PPT slide 18 |
| Self-study material and accompanying literature for chapter 1 - Social Media: Response to Fake News:* Fischer, S., 2020. *"Unreliable" news sources got more traction in 2020*. [online] Axios. Available at: <https://www.axios.com/unreliable-news-sources-social-media-engagement-297bf046-c1b0-4e69-9875-05443b1dca73.html?utm\_campaign=organic&utm\_medium=socialshare&utm\_source=twitter> [Accessed 28 September 2021].
* Hills, T. and Menczer, F., 2020. *Information Overload Helps Fake News Spread, and Social Media Knows It*. [online] Scientific American. Available at: <https://www.scientificamerican.com/article/information-overload-helps-fake-news-spread-and-social-media-knows-it/> [Accessed 28 September 2021].
* Jiaxi Sun, "Research on the Credibility of Social Media Information Based on User Perception", *Security and Communication Networks*, vol. 2021, Article ID 5567610, 10 pages, 2021. <https://doi.org/10.1155/2021/5567610>
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| 1 teaching hour**Fake News Detection Models - Part 1** | 45 min | **Fake News Detection Models - Part 1**Presentation of various fake news detection models using PPT slides 19-27. (See description above for more information on the content). Each slide presents a different detection model often referring to the advantages and disadvantages based on research and examples. |  | PPT slides 19-27 |
| Self-study material and accompanying literature for chapter 2 - Fake News Detection Models:* Aldwairi, M. and Alwahedi, A., 2018. Detecting Fake News in Social Media Networks. *Procedia Computer Science*, [online] 141, pp.215-222. Available at: <https://www.sciencedirect.com/science/article/pii/S1877050918318210> [Accessed 28 September 2021].
* Collins, B., Hoang, D., Nguyen, N. and Hwang, D., 2021. Trends in combating fake news on social media – a survey. *Journal of Information and Telecommunication*, [online] 5(2). Available at: <https://www.tandfonline.com/doi/full/10.1080/24751839.2020.1847379> [Accessed 28 September 2021].
* Lamprou,Evangelos, Nikos Antonopoulos, Iouliani Anomeritou, and Chrysoula Apostolou. 2021. Characteristics of Fake News and Misinformation in Greece: The Rise of New Crowdsourcing-Based Journalistic Fact-Checking Models. *Journalism and Media*2: 417–439. https://doi.org/ 10.3390/journalmedia2030025
* Tools, M., 2021. *How to Spot Real and Fake News: Critically Appraising Information*. [online] Mindtools.com. Available at: <https://www.mindtools.com/pages/article/fake-news.htm> [Accessed 28 September 2021].
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| 1 teaching hour **Fake News Detection Models - Part 2 / How to Recognise False Content - The 5Ws** | 10 min | **Fake News Detection Models - Part 2: Technology and fact-checking**Follow the PPT slides 28-31, present the content and knowledge provided on the slides and in the explanations above. |  | PPT slides 28-31 |
| 15 min  | **Activity: Testing the Technology**PPT slide 32Introduce the activity and the general questions. | Activity in groupsStudents work in groups and follow the instructions  | PPT and(in distance learning):Use of computer/laptop/tablet with internet access orBreakout rooms  |
| 20 min | **How to Recognise False Content - The 5Ws**Follow the PPT slides 33-39, present the content and knowledge provided on the slides and in the explanations above. |  | PPT slides 33-39 |
| Self-study material and accompanying literature for chapter 3 - How to Recognise False Content: The 5Ws* Erau.libguides.com. 2021. *Fake News or Disinformation: Analyze Your Sources*. [online] Available at: <https://erau.libguides.com/c.php?g=692277&p=4915995> [Accessed 28 September 2021].
* Hertz, M., 2019. *Digital and media literacy in the age of the internet*. Lanham: Rowman & Littlefield.
* Smarts, M., 2017. *How to recognize false content online - the new 5Ws - tip sheet*. [ebook] Available at: <https://mediasmarts.ca/sites/mediasmarts/files/tip-sheet/tipsheet\_false\_content.pdf> [Accessed 28 September 2021].
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| 1 teaching hour**The Future of Fake News: AI Generated Synthetic Media** | 10 min | **Examples**Follow the PPT slides 40-42, present the content and knowledge provided on the slides and in the explanations above. |  | PPT slides 40-42 |
|  | 15 min | **The Future of Fake News: AI Generated Synthetic Media**Follow the PPT slides 43-47, present the content and knowledge provided on the slides and in the explanations above. |  | PPT slides 43-47 |
|  | 15 min | **Activity: Detect Political Fakes**PPT slide 48Introduce the activity and the instructions. Provide the students with the activity [link](https://detectfakes.media.mit.edu/). Divide students into groups and monitor the discussion and engagement of the students. | Activity in groupsStudents work in groups and follow the instructions of the activity of the [link](https://detectfakes.media.mit.edu/). Encourage discussion for each task between the students.  | PPT and(in distance learning):Use of computer/laptop/tablet with internet access or Breakout rooms  |
|  | 5 min | **Reflection and concluding remarks on the module**Reflect on the lessons – what have we learned about detecting fake news?Leading questions:* Are the new technologies for the detection of fake news beneficial for you?
* In your opinion, what are the important steps in tackling fake news?
* Critical thinking: What can actually help prevent the spread of fake news?
 | Let students summarize and reflect on what they’ve taken from the lessons, what they will keep in mind, what they liked and disliked following the questions on the slide. | PPT slide 49 |
| Self-study material and accompanying literature for chapter 4 - The Future of Fake News: AI Generated Synthetic Media* Jaiman, A., 2020. *AI Generated Synthetic Media, aka deepfakes*. [online] Towards Data Science. Available at: <https://towardsdatascience.com/ai-generated-synthetic-media-aka-deepfakes-7c021dea40e1> [Accessed 28 September 2021].
* Jaiman, A., 2020. *Deepfake harms and threat modeling*. [online] Towards Data Science. Available at: <https://towardsdatascience.com/deepfakes-harms-and-threat-modeling-c09cbe0b7883> [Accessed 28 September 2021].
* Somers, M., 2020. *Deepfakes, explained*. [online] MIT Sloan. Available at: <https://mitsloan.mit.edu/ideas-made-to-matter/deepfakes-explained> [Accessed 28 September 2021].
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