46. THE ROLE OF MODERN TECHNOLOGIES IN THE CREATION AND DISTRIBUTION OF DISINFORMATION

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This paper represents an analysis of the spread of disinformation through AI-generated text, deep fakes, social media algorithms, and bot farms. Disinformation can be challenged with more robust fact-checking capabilities and digital literacy.

New technologies are one of the prevalent reasons behind the creation and spread of misinformation, allowing it to spread quickly into the minds of individuals. New technologies like artificial intelligence, social media algorithms, deep fakes, armies of bots, and sponsored advertising strategies all represent formidable weapons which can spread and create misinformation.

One of the most dangerous occurrences is the computer-generated fabrication of fake text by AI. GPT-4 models can generate articles that are difficult to distinguish from real news articles. These articles are likely to be made up of manipulative words, emotional content, and fabricated facts. The case becomes worse when the same news is spread through authoritative media outlets, because as it becomes easy for people to confuse it with credible information. This erodes the credibility of conventional journalism and introduces into in the world of information [1].

Social media algorithms also spread disinformation. Their main work is to facilitate interactions among users: the more responses or comments a post generates, the more it will be exposed to other users. Since emotive content provokes a stronger reaction, whereas confirmed facts are pushed with less intensity. As a result, disinformation is spread much faster and more extensively than accurate information [2].

Another significant danger is deepfake technology, which allows the creation of fake photos and videos that are real. It is possible, using neural networks, to generate speeches that were never given by politicians or to create compromising photos of stars. These technologies not only can discredit individuals but can be used to influence opinion and spread false news [3].

Bot farms are also toolsactively used to spread misinformation. These are groups of artificial accounts run with little human oversight. They create artificially the impression of widespread popularity or outrage, spread false news, and even interfere with political processes. These tools have often been used to influence elections, spread propaganda, and destabilise public opinion [4].

Additionally, disinformation is actively spread by targeted advertising algorithms. These allow content to be posted with specific groups of users based on their interests, political views, and search history. This creates so-called "information bubbles" in that a person is shown only that information that aligns with existing beliefs and principles. Therefore, false stories become absolute truth, and society becomes more polarised [5].

Another danger comes from automatic content dissemination technologies, such as recommendation systems and customised news updates. These programs do not alwayseffectively distinguish between true and false information, and thus false news is disseminated to a vast number of people.

New technologies, as they offer previously unknown chances for society's improvement, act like a two-edged sword: they facilitate innovation but, simultaneously, trigger advanced networks of disinformation. These threats can be only countered by adopting an integrated strategy that includes algorithmic accountability for social media companies, the deployment of AI-founded verification systems in order to actively flag synthetic content, and global action aimed at establishing critical media literacy as a digital citizenship skill. Above all, disinformation fighting requires countermeasures at the system level – from real-time detection of propaganda produced by AI to dismantling botnets through advanced cybersecurity measures. The convergence of open AI governance, collaborative policymaking, and people empowerment is not only desirable but also imperative: as it guarantees democratic integrity, maintains epistemic security, and renders public discourse sustainable. In the era of algorithmically mediated truth, protecting information ecosystems is not merely a question of technicalities – it becomes the cornerstone of 21st-century social resilience.

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