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Using Artificial Intelligence Systems in News Verification: An Application on X

Haber Doğrulamada Yapay Zekâ Sistemlerinin Kullanımı: X Üzerinde Bir Uygulama

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ABSTRACT

The aim of this study is to analyse the relationship between the interaction rates and the number of followers of independent news accounts broadcasting on social network platforms and the types of fake news they publish and the frequency of publishing fake news. In the study, fake news was categorised using qualitative content analysis method. In addition to this, artificial intelligence was used to check the accuracy of news content shared on social networks and to distinguish misleading information. To obtain the data, Chat GPT was utilised and an AI-powered chatbot was developed with the help of algorithms prepared by the researchers to determine the accuracy of the news. The population of the study consists of the accounts practicing social media journalism on the social networking platform X in Türkiye. The sample of the study consists of 6 accounts with the highest interaction selected by purposive sampling method among the accounts that engage in social media journalism on this platform and have the highest interaction. According to the results obtained from the research, a large proportion of the news content shared by accounts practicing social media journalism on the X platform in Türkiye consists of unverifiable news content. In the category of unverifiable news, news is mostly created in the category of "Fabricated" content.

Keywords: Fact Checking, Artificial Intelligence, Fake News, Chat GPT, X.

ÖZ

Bu çalışmanın amacı sosyal ağ platformlarında yayın yapan bağımsız haber hesaplarının etkileşim oranları ve takipçi sayıları ile yayınladıkları sahte haberlerin türleri ve sahte haber yayınlama sıklığı arasındaki ilişkiyi analiz etmektir. Araştırmada nitel içerik analizi yöntemi kullanılarak sahte haberler kategorize edilmiştir. Ayrıca, sosyal paylaşım ağlarında paylaşılan haber içeriklerinin doğruluğunu kontrol etme ve yanıltıcı bilgileri ayırt etmek üzere yapay zekadan faydalanılmıştır. Verileri elde etmek için, Chat GPT'den yararlanılmış ve haberlerin doğruluğunu tespit etmek için araştırmacılar tarafından hazırlanan algoritmalar yardımı ile bir yapay zekâ destekli sohbet botu geliştirilmiştir. Araştırmanın evrenini, Türkiye'de X adlı sosyal paylaşım platformunda sosyal medya haberciliği yapan hesaplar oluşturmaktadır. Bu platformda sosyal medya haberciliği yapan ve en fazla etkileşime sahip olan hesaplar arasından amaçlı örnekleme yöntemiyle seçilen en yüksek etkileşime sahip 6 hesap ise araştırmanın örneklemini temsil etmektedir. Araştırmadan elde edilen sonuçlara göre, Türkiye'de X platformunda sosyal medya haberciliği yapan hesapların paylaştığı haber içeriklerinin büyük bir oranı doğru olmayan haber içeriklerinden meydana gelmektedir. Doğrulanamayan haberler kategorisinde ise en fazla "Uydurma" içerik kategorisinde haber yapılmaktadır.

Anahtar Kelimeler: Haber Doğrulama, Yapay Zekâ, Sahte Haber, Chat GPT, X.

Introduction

Social media, one of the most important environments of the digital age, is a virtual life space where individuals perform many life activities such as entertainment, education, leisure, socializing and information gathering. Social media, which allows individuals to interact and access information and news quickly and easily at any time, has differentiated it from traditional news sources and tools. Therefore, due to these characteristics, social media journalism is rapidly replacing traditional journalism. However, social media journalism often lags traditional media in terms of producing quality and accurate news.

Social media appears to be the medium where disinformation and misinformation are most produced and disseminated. Fake news content published intentionally or unintentionally in this medium can reach very large audience in a very short time. Moreover, many websites or social media accounts are created to produce fake or false news on social media and the internet.

Fake news poses problems for individuals and societies, as well as for businesses and governments. Inaccurate news can cause an individual to make the wrong decision, cause outrage in the society, cause financial and moral damage to the organization because it can mislead the society, and cause governments to fall into difficulties due to the wrong perception (Murayama, 2020; Ozbay & Alatas, 2020). The high and rapid spread of these fake news, especially on social networks, has led to a decrease in trust in the news published on social networks.

66% of US citizens are concerned about the accuracy of news seen on social media to a certain extend (Statista, 2022). Also in the US, 94% of journalists said that fake news and information is a major problem in the US (Konopliov, 2023). More than half (57.7%) of social media users in the UK also stated that they have encountered fake news on social media (Chadwick & Vaccari, 2019). In Türkiye, people are heavily exposed to fake news content, especially on social media.

In Türkiye, both private and public institutions/platforms have been established to find solutions to this problem, in other words, to reveal fake news or to confirm the accuracy of a news content. Republic of Türkiye Directorate of Communications Center for Countering Disinformation, teyid.org, Anadolu Agency's Confirmation Line, and doğrula.org are some of them. However, it is not possible for these platforms or institutions to uncover a large number of fake news in a short period of time. At this point, artificial intelligence emerges as a new tool to verify these fake news, especially in social media, in a short time. The AI-powered chatbot trained in news verification detects fake news in a very short time. From this point of view, the study also provides an opportunity to demonstrate the ability of an AI-powered chatbot trained in news verification to check the accuracy of news published on the platform X and to detect and categorise fake news.

Artificial Intelligence, Machine Learning, Deep Learning

Artificial intelligence is the ability of a computer or a computer-controlled robot to perform human functions such as reasoning, learning, decision making, problem solving, inference, generalization and adaptation to the environment (Chen et al., 2020, pp. 75267, Arslan, 2020, p. 76). In other words, artificial intelligence is a set of techniques for simulating human intelligence by using a set of algorithms to create a new computer that can perform tasks like humans while performing parallel computation (Bharadiya, 2023, p. 25).

Artificial intelligence is increasingly used in different fields to integrate large data sets, refine measurements, guide experiments, provide reliable models, explore the field of theories compatible with data, and conduct autonomous exploration (Wang et al., 2023, pp. 47). The Digital Transformation Office (2024) categorizes these areas where AI is used as image processing, audio processing, text processing, data processing, health data analysis and treatment planning, unmanned AI-assisted driving systems, insurance and finance, big data analytics, smart applications

in agriculture and animal husbandry, and cybersecurity.

Machine learning, a subfield of artificial intelligence that paves the way for the creation of intelligent computers, means that a computer system learns to do something from the data it has. In other words, these machines do not blindly follow commands but learn new ways of doing things. Deep learning is a subtype of machine learning that uses built-in model architectures to represent data abstraction. Deep learning simulates the data processing functions of the human brain to build models and produce accurate results. Machine learning requires structured data, but deep learning networks focus on the levels of artificial neural networks (Bharadiya, 2023, p. 25; Bakırcı, 2017, p. 55).

Although the history of artificial intelligence goes back a long way, the most concrete step was taken by Alan Turing. In his 1950 article "Computing machines and intelligence", Turing discussed the possibility of machines being intelligent and proposed a test to determine whether a machine is intelligent or not with the Turing Test. However, the concept of artificial intelligence was first discussed at a conference held at Dartmouth College in 1956 with the participation of 4 American researchers (John McCarthy, Marvin Minsky, Nathaniel Rochester and Claude Shannon) and with John McCarthy's proposal, it was almost formalized and started to be used (Dülger, 2021, p. 5).

After this conference, artificial intelligence is not just a technology that has increasingly entered the academic world and then human life. It is an overarching force shaping daily practices, personel and professional interactions and environments (Taddeo & Floridi, 2018). Moreover, AI offers many opportunities to contribute to the well-being of individuals and the progress of economies and societies. However, it also brings with it a variety of new ethical, legal, social and technological challenges (Thiebes et al., 2021, pp. 447). At this point, the National Science and Technology Council (2016, p. 3-4) states that artificial intelligence, one of the most important technologies of the age, should be used efficiently the relationship between humans and artificial intelligence should be built correctly. This is because, contrary to popular belief, most artificial intelligence systems will cooperate with humans to achieve optimum performance rather than replacing them. At this point, more research is needed to create effective interactions between humans and artificial intelligence systems.

Artificial intelligence is a transformative technology that promises enormous societal and economic benefits. Moreover, artificial intelligence has the potential to revolutionize the way we live, work, learn, discover and communicate. At this point, research in artificial intelligence could lead to increased economic prosperity, improved educational opportunities and a higher quality of life. Due to these potential benefits, many countries, especially the United States, have been investing in artificial intelligence research for years (National Science and Technology Council, 2016, p. 3).

According to Aydınalp (2020, p. 2287), the development of artificial intelligence is considered one of the biggest thresholds since the existence of humanity and it cannot be predicted in which direction artificial intelligence will develop and how it will change humanity. The biggest question in this development is the future state of artificial intelligence emotionally and morally. The possibility that artificial intelligence may undergo emotional and moral evolution emerges as a much more thought-provoking problem.

Artificial intelligence is profoundly impacting and opening new horizons in many areas, including business, corporate practices and government policies. In fact, the intelligence of machines and robots with deep learning capabilities has profoundly disruptive and enabling effects on business, governments and society (Goralski and Tan (2020, pp. 1). One of the areas affected by artificial intelligence is undoubtedly the field of communication. Artificial intelligence has brought great changes and innovations to the field of

communication, especially in cinema, journalism, advertising and new media.

As a matter of fact, the introduction of voice assistants, the use of chatbots, the creation of meaningful sentences thanks to natural language processing, or the guidance of the words searched on the internet and the introduction of advertisements related to these issues appear as elements that will create an impact in the field of communication. Artificial intelligence is utilized in many communication-related tasks such as film script writing, social media management, crisis communication, image and sound processing, and news writing (Yıldız, 2021, p. 606-607).

In the field of communication, journalism is one of the most important areas where artificial intelligence is being applied. When artificial intelligence is mentioned in the field of journalism, algorithm journalism, automated journalism, big data journalism or data-driven forms of journalism, personalized news content or algorithms that personalize the entire news production process come to mind (Etike, 2023a, p. 594). In fact, the traditional journalistic practices of on-site monitoring, observation, discourse and writing are now evolving into a new type of journalism based on algorithms and data with artificial intelligence. Algorithm-centered robotic systems in news editing, gathering, publishing and distribution are now increasingly present in the journalism industry (Işık et al., 2022, pp. 1249).

The same success that artificial intelligence has had in the stages of gathering, writing, editing, publishing and distributing news, it has also had in determining the accuracy of news. The fact that it is difficult to determine the source of the news published and distributed on the internet and social networks has paved the way to produce fake news in large numbers. However, inaccurate news written and distributed for different purposes in the virtual network can be easily detected through artificial intelligence. Artificial intelligence can analyze millions of data in the internet base and reveal whether the news is true or not in a short time.

News Verification

Importance of News Verification

One of the greatest paradoxes of the information age is that we have access to more information than ever before, yet it is becoming increasingly difficult to be certain of its accuracy. Today, news verification seems to be the most important way to resolve this contradiction, because distinguishing the correct information in the dense flow of information is vital for society to be properly informed and for individuals to make informed decisions. Despite the potential for the rapid spread of misinformation, especially through social media, the process of news verification will ensure that individuals are equipped with the facts and that society has an increasing public awareness. This process will strengthen one of the fundamental principles of democracy - informed participation - by ensuring that social and political debate is well-founded.

In today's digital media age, the concepts of "post-truth" and "fake news" have raised concerns about the accuracy and reliability of the flow of information. The term "post-truth" refers to a time when facts are overshadowed by personal beliefs and emotions, while "fake news" refers to the dissemination of deliberately misleading information, often with the goal of reinforcing a political process or manipulating public opinion (Lewandowsky et al., 2017). The increasing use of these terms in our lives has further highlighted the importance of verifying the accuracy of news and the reliability of its sources. In this era of ever easier access to information, the rapid dissemination of misleading information, especially on social media, increases the risk of misleading and misdirecting the public.

Verification of news is vital for the continuation of democratic processes and for society to be well-informed and make the right decisions. Unverified or misleading news can influence voter behavior, shape public perception and even threaten national security. Therefore, questioning the credibility of news sources and the accuracy of the information provided ensures that individuals have

accurate access to the facts and are protected from manipulative content (Wardle & Derakhshan, 2017). In addition, the study of the concepts of "post-truth" and "fake news" has become even more important in the process of news verification in order to accurately inform the public and reduce the risks posed by misleading content. Users need to be able to critically evaluate information sources, which is why researchers and media organizations should develop and implement methods to determine the accuracy of information (Ireton & Posetti, 2018). Media organizations and researchers, who have a critical role in news verification, can protect the public from the harm of misleading information by applying ethical journalism standards and developing methods. By protecting users from the effects of "post-truth" and "fake news", these methods can contribute to a healthy public dialogue and the preservation of democratic processes.

Moreover, if we consider the strategic goals of artificial intelligence for news organizations, which are pioneers in the integration of artificial intelligence in our country, the item "writing algorithms to question the accuracy of news, information and images and whether they have been altered by algorithms" is among the ideal strategic goals (Etike, 2023b, p. 415).

In today's increasingly digital world, concepts such as inaccurate or fake news content, disinformation and misleading information reinforce the need to question the accuracy of information and the reliability of its sources. It is therefore necessary to look at the basic principles and approaches to understand the importance of news verification.

Basic Principles and Approaches to News Verification

Untruthful information is the general name for untrue, misleading or distorted information and can take various forms, such as fake news, disinformation and misleading information. Fake news is the intentional or unintentional dissemination of information that generally does not reflect reality. Disinformation is a type of misinformation that deliberately distorts information to create a misleading effect. Misleading information, on the other hand, is often taken out of the context of reality and used to create misconceptions (Wardle & Derakhshan, 2017). Each of these genres has a different impact on the reader, increasing the importance of news verification.

The basic principles of news verification are based on accuracy, objectivity and credibility. Accuracy emphasizes that the information presented should be based on facts. Objectivity means that the journalist presents information free from personal biases. Reliability means that the source and content of information should be reliable (Ireton & Posetti, 2018). News verification approaches include cross-checking sources, data analysis, visual verification and the use of expert opinion. These approaches form the basis for identifying misinformation and presenting accurate information to the public.

Traditional news verification methods are generally based on verifying the accuracy of sources and the authenticity of the content of the news story. These methods have been used in journalism for many years and involve utilizing various sources such as interviews, official documents and eyewitness accounts. However, the speed and information density brought about by the digital age have revealed the limitations of traditional methods. Especially the verification of false information that spreads rapidly through social media is becoming difficult with traditional methods. These limitations require the development of new verification techniques and tools (Brandtzaeg & Følstad, 2017). With the advancement of digital technologies, artificial intelligence-based algorithms, automated content analysis and online databases have emerged as new approaches to news verification. These techniques can quickly analyze large data sets, confirm the authenticity of images and videos, and automatically detect misleading information (Vosoughi et al., 2018). These new tools can help journalists and fact-checking organizations more effectively address and detect inaccurate information.

However, these organizations face several challenges in the news verification process. These challenges include the lack of sufficient time and resources for verification, the complexity and diversity of misleading information, the deliberate professional production of misinformation, and the public's propensity for misinformation (Lewandowsky et al., 2017). Moreover, political and social polarization can reduce trust in verified information and consequently increase the impact of misinformation.

Verification of news content is indispensable for the healthy functioning of democratic societies. Understanding the definition and types of misinformation, applying verification principles and approaches, and overcoming the limitations of traditional methods are key components of this process. While the integration of new technologies and techniques strengthens the news verification process, it requires constant effort and innovation to overcome challenges. Some of the innovations required for news verification are supported by artificial intelligence tools and machine learning.

Artificial Intelligence and Machine Learning Methods in News Verification

Artificial Intelligence and Machine Learning technologies are becoming increasingly important in news verification processes, given the speed and diversity of information flow in the digital age. They play a critical role in detecting misinformation and verifying content. The main applications of Artificial Intelligence and Machine Learning in news verification processes include text analysis, visual recognition, source identification and language processing techniques. The methods used in these areas provide advanced algorithms and big data analysis to quickly and effectively assess the accuracy of information (Conroy et al., 2015). Text analysis is used to detect misinformation by analyzing the content and language used in news texts. Image recognition is used to determine the source and accuracy of images and videos. Artificial Intelligence and Machine Learning algorithms can recognize patterns in text and visual content and compare them to previously verified data sets. These techniques allow for the rapid detection of manipulated content or fake images (Shu et al., 2017). Source identification is used to determine the origin of a news story or claim. By assessing the background and reliability of sources, Artificial Intelligence and Machine Learning can determine whether information has a credible basis. Language processing techniques use natural language processing (NLP) algorithms to analyze more subtle language features in texts, such as sentiment and tone analysis. These techniques help to better understand the context and intent of news stories (Hossain et al, 2019).

The application of these technologies faces immediate challenges such as the quality and quantity of data, the bias of algorithms and the constant evolution of misleading information. However, the continued development of Artificial Intelligence and Machine Learning has the potential to make news verification processes even more effective. In the future, these technologies will strengthen the information ecosystem and make it easier for the public to access accurate information by providing more dynamic and relevant solutions to combat misinformation (Zhang et al., 2018).

A Custom GPT: News Verification and Analysis Tool Project

With the advancement of artificial intelligence technologies, the customization of language models provides the opportunity to provide more detailed solutions for specific user requirements. This concept, called Customized Generative Pre-Trained Transformer (Custom GPT), refers to an artificial intelligence model that is trained on data sets specifically prepared for users. With this method, GPT departs from its default general-purpose structure and aims to develop customized solutions to address the specific needs of a specific industry, field or user group.

In line with this goal, building customized Custom GPT models on advanced language model platforms such as Chat GPT will be an important step towards improving the accuracy

and reliability of news. As part of the study, the news verification application created using the development tools provided by OpenAI will play a critical role in combating fake news and improving media literacy.

Custom GPT Creation Processes

When developing news verification and analysis tools, it is important to prepare the training data set. This process should teach the application what to do and what to avoid. For example, long texts allow the model to be trained more effectively by providing specific words and features for real and fake news data (Jarmul, 2017). These instructions are critical for the model to distinguish between real and fake news.

A Chat GPT Plus subscription is also required to create and use a custom GPT. Users can upload the necessary topic-related files to their private GPTs, configure their advanced customization options, and then save and share their private GPTs publicly on the web. OpenAI has also provided the necessary conditions for users to find their custom GPTs by other users using specific search strategies within the Chat GPT platform (TechTarget, 2024; Zapier, 2024).

The training of the News Verification and Analysis Tool (Shape 1) Custom GPT application, which was developed in the course of the study and is designed to verify screenshots taken on Twitter (X Platform), is aimed at verifying the news. To achieve this, the following algorithmic instructions were added to the Custom GPT's customization options.

"*Your aim is to verify the news sourced from Twitter that is given to you as a screenshot. You always respond in English. To verify the news, always follow these steps:*

1. If the user has not uploaded a screenshot of the tweet, request it.
2. Never respond to the user and don't make any explanation until you reach the last step.
3. Try to understand the news text in the screenshot and the news image, if there is one.
4. Check whether this news is available in other sources on Bing.
5. After doing all these, create the output according to the format below.

Output format:

- If the news is 100% true, state that the news is true by stating the sources.

- If the news is not verified 100%, specify fake news category from below:

-False connection: *Presenting accurate information in a different narrative by detaching it from the events, situations or relationships in which it is embedded.*

-Misleading content: *Content created to mislead or misdirect by distorting its true meaning.*

-False context: *When a photo, video, quote or news headline that is associated with an event that is claimed to show or describe an event belongs to another event.*

-Manipulated content: *The manipulation of real information or images for the purpose of deception. Changing information through selection, addition and subtraction.*

-Satire or parody: *Texts written for entertainment and ridicule, often in a similar format to news.*

-Imposter content: *Creating an imitation of a person or organization with the aim of creating the perception that the person or the information provided is true, or counter-propaganda. Often the names or logos of reliable, well-known, mainstreamed and real sources with high reputation are imitated.*

-Fabricated content: *Content that is completely fabricated to deceive and cause damage, with no basis in fact (Wardle, 2020).*

- In any case, briefly summarize the news and its background based on your research.

Rules:

- Always respond in English.

- If the language of the news is Turkish, use Turkish first for searching on Bing, but if you do not get results, then make search in English language.

-If the news is not about Türkiye but about a foreign country, research the sources of that country and respond accordingly.

-If the news is a about a government, make sure to check if it is an official statement. If there is no official statement, the news may not be 100% true.

-If the news is about a company, check whether there is an official statement. If there is no official statement, the news may not be 100% true.

-Don't explain what you do.

-Don't explain what you did.

-Don't provide any information about the errors you encounter."

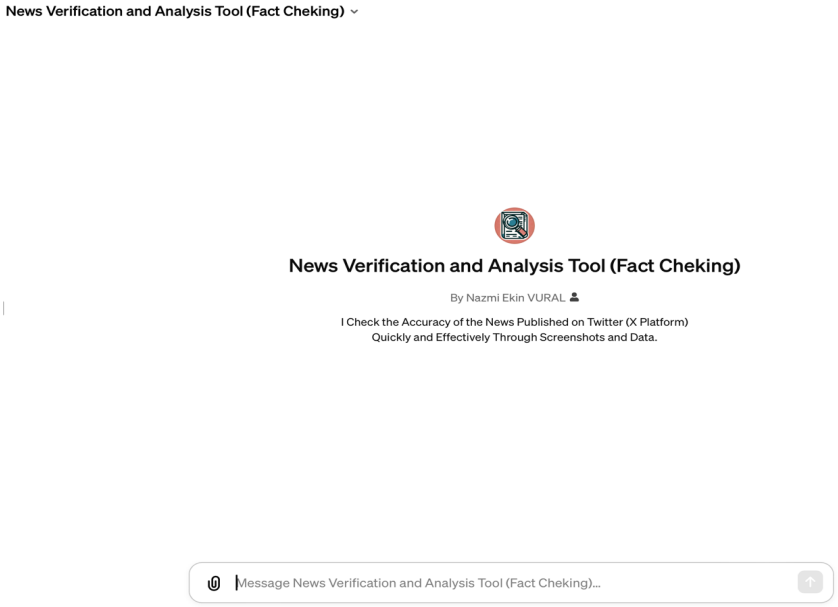
Material and Method

Purpose, Importance and Questions of the Research

This study analyses the fake news published by news accounts that publish news on social media platforms and reveals the relationship between the type and frequency of fake news and the interaction rate and number of followers of the accounts where the news is published. In this context, the observation unit of the research is the false news published by social media news accounts on social network platforms. In the research, this news is subjected to content analysis and the type and frequency of false news published by which sites are analysed. Independent social media news accounts that are not affiliated with mainstream media organisations in Türkiye and whose posts receive the most interaction were also analysed in terms of the fake news they publish. The study contributes to the literature on the impact of digital platforms publishing on news and journalism by questioning the relationship between the interaction rates, follower numbers of social media news accounts and their capacity to produce, circulate and spread fake news.

Shape 1

A Custom GPT: News Verification and Analysis Tool



Artificial intelligence is utilised to verify the accuracy of news content shared on social networks and to distinguish misleading information. To obtain the data, Chat GPT was utilised and an AI-powered chatbot was developed with the help of algorithms prepared by the researchers to determine the accuracy of the news. In this context, another contribution of the study to the field was the development and use of a bot for the effective use of artificial intelligence technologies in detecting fake news. All news published by independent news accounts within the time interval of the research were subjected to accuracy analysis by means of this bot and it was checked whether these news were accurate or not. Therefore, this study is also important in terms of determining how artificial intelligence affects news and journalism, which is one of the indispensable elements of the field of communication, and how artificial intelligence is used in the detection of inaccurate news and will provide data for other scientific studies.

In line with the aim of the study, the questions sought to be answered regarding news verification are as follows:

RQ1: What is the level of inaccurate news shared by social media journalism accounts?

RQ2: What is the relationship between the interaction rate of accounts and sharing inaccurate news?

RQ3: What is the relationship between the order of interaction of accounts and sharing inaccurate news?

RQ4: What is the relationship between the number of followers of accounts and sharing inaccurate news?

Method, Population and Sample of the Study

The content analysis method, one of the qualitative research methods, was used in the study. The population of the study consists of the accounts practicing social media journalism on the social networking platform named X in Türkiye. The 6 accounts (DarkWeb Haber, 23 DERECE, ZAM Haber, Pusholder, BPT Haber, Aykırı), which were selected through purposive sampling method among the accounts that engage in social media journalism on this platform and have the highest interaction, represent the sample of the study.

Data Collection and Analysis

To obtain the data, Chat GPT, an AI-powered chatbot developed by OpenAI, was utilized. Through Chat GPT, an AI-powered chatbot called “News Verification and Analysis Tool” was developed to access the news shared on the social networking platform X and determine their accuracy. We obtained 100 news items from 6 social media journalism accounts on the X platform between 01.02.2024 - 29.02.2024. These 6 social media journalism accounts were identified according to their interaction and number of followers among the news accounts broadcasting on the X platform. Among the 25 accounts with high interaction and number of followers, the accounts with the highest interaction rates were selected and and the accounts where the interaction rate dropped dramatically were excluded from the analysis. When selecting the news, news that are certain to be accurate in terms of serving the purpose (a sentence taken from a video interview, celebration/sadness posts of important days and events, etc.) were not included in the analysis. The content analysis method was used to analyze the data obtained. The coding scheme was created by taking the categories of inaccurate news (satire or parody, false connection, misleading content, false context, imposter content, manipulated content, fabricated content) in Wardle's (2020) study as an example.

When coding, human coding was chosen as one of the methodological options in content analysis (Neuendorf & Kumar, 2016). Both researchers coded the news separately on the coding sheet and the results were compared with each other to ensure reliability. In addition, the researchers conducted cross-examination and checks during the coding process. Microsoft Excel program was used for coding and frequency analysis.

In the study, the interaction rate formula developed by Hwong et al. (2017) was used to calculate the interaction rate of X accounts engaged in social media journalism. "p" refers to the total number of retweets, "r" refers to the total number of comments, "a" refers to the total number of likes, and "nf" refers to the total number of followers.

$$\text{IR (Interaction Rate)} = \frac{1*p + 0.75*r + 0.5*a}{nf}$$

Findings and Comments

The study analyzed the news from the accounts named DarkWeb Haber, 23 DERECE, ZAM Haber, Pusholder, BPT Haber and Aykırı, which engage in social media journalism on the X platform. When selecting the accounts, the order of interaction and the number of followers worldwide were taken into consideration (Table 1).

The interaction rate formula was used to calculate the interaction rate of social media journalism accounts on the X platform. The number of comments, retweets, likes and followers of the accounts were used in the formula. According to the data obtained, the account with the highest interaction rate was "BPT Haber", while the account with the second highest interaction rate was "ZAM Haber". The account with the lowest interaction rate was "23 DERECE". When the relationship between the interaction rate and the number of followers is examined, it is seen that there is an inverse proportion. Accounts with a high number of followers have a low interaction rate, while accounts with a low number of followers have a high interaction rate (Table 2).

Table 1

X Accounts Conducting Social Media Journalism

Name	Username	Worldwide Interaction Rank	Number of Followers
DarkWeb Haber	@Darkwebhaber	144	1.4 Million
23 DERECE	@yirmiucderece	308	683 Thousand
ZAM Haber	@ZAMajans	274	699 Thousand
BPT Haber	@bpthaber	101	835 Thousand
Pusholder	@pusholder	211	2.7 Million
Aykırı	@aykiricomtr	456	783 Thousand

Table 2

Interaction Rate of X Accounts

Name	Followers	Comments	Retweets	Likes	Views (avg.)	Interaction Rate
BPT Haber	835 Thousand	3.152	4.240	50.768	1.193.500	0,038
ZAM Haber	699 Thousand	2.159	3.094	34.493	340.176	0,031
Aykırı	783 Thousand	2.416	3.424	17.808	463.875	0,018
DarkWeb Haber	1.4 Million	2.686	2.142	29.597	687.882	0,014
Pusholder	2.7 Million	3.485	2.941	57.494	891.588	0,013
23 DERECE	683 Thousand	1.309	1.717	11.832	221.359	0,013

The data obtained from these accounts were examined and analyzed by dividing them into two sections in general and eight sections in particular. In general, the news content detected by the AI-powered chatbot was categorized as true news or false news. In particular, inaccurate news content was analyzed under seven different news categories (satire or parody, false connection, misleading content, false context, imposter content, manipulated content, fabricated content).

The points analyzed in the general framework: The number of true and fake news content, the categories in which fake news are included, the relationship between the number of followers and the accuracy of the news, the relationship between the interaction rate and the accuracy of the news, and the relationship between the order of interaction and the accuracy of the news. In this regard, this part of the study includes the results of the analysis.

According to the data obtained from the research, 58% of the news shared by social media journalism accounts on the X platform is true, while 42% of the news is fake. However, in terms of fake news, "fabricated content" was the most common category of news. After that, fake news was mostly made in the category of "false connection". According to another analysis, only 1 fake news was made in the "imposter content" category, while no fake news was made in the "satire or parody" category (Table 3).

However, according to the data, there is a significant relationship between the interaction rate of accounts and the sharing of fake news. Although "Zam Haber" and "Aykırı" accounts are among the accounts that make the most fake news, they rank high in the interaction rate. "DarkWeb News" and "Pusholder", which are among the accounts that make the least fake news, are at the bottom of the interaction rates. Accordingly, it is possible to say that fake news increases interaction (Table 4).

Table 3

News Verification

Name	**True**	**Fake**						
		Satire or parody	***False connection***	***Misleading content***	***False context***	***Imposter content***	***Manipulated content***	***Fabricated content***
DarkWeb Haber	13	0	1	0	0	0	2	1
23 DERECE	9	0	3	1	1	0	0	3
ZAM Haber	8	0	2	1	1	0	3	2
Pusholder	10	0	1	0	1	0	1	4
BPT Haber	12	0	0	0	0	1	1	2
Aykırı	6	0	3	2	0	0	0	5
Total	**58**	**42**						

Table 4

The Relationship between Interaction Rate and Fake News

Name	**Interaction Rate**	**Number of Fake News**	
		Number	**%**
BPT Haber	0,038	4	9,5
ZAM Haber	0,031	9	21,4
Aykırı	0,018	10	23,8
DarkWeb Haber	0,014	4	9,5
Pusholder	0,013	7	16,7
23 DERECE	0,013	8	19,1

When the data is analyzed, it is found that there is a significant relationship between the interaction rank of the accounts worldwide and the accuracy of the news they share. As the order of interaction increases, the number of fake news decreases. In other words, the number of fake news increases as the interaction order of the accounts decreases. In fact, BPT Haber, which ranks first in the order of interaction, ranks last in the number of fake news posts. Likewise, DarkWeb Haber, which ranks second in terms of engagement, ranks second to last in terms of sharing fake news. Aykırı, which ranks last in terms of engagement, ranks first in terms of sharing fake news (Table 5).

When the research data were analyzed, it was found that there was a significant relationship between the number of followers of the accounts and the number of fake news they shared. While accounts with more followers share less fake news, accounts with fewer followers share more fake news. In fact, the total number of fake news shared by the accounts ranked in the last three places in the number of followers is almost twice the total number of fake news shared by the accounts ranked in the first three places (Table 6).

Conclusion

The internet and social media, which have penetrated almost every aspect of human life, have brought about innovation and change in many fields such as law, health, education, trade and media. News and journalism have also been one of the fields affected by the transformation brought about by the internet, social media and subsequently artificial intelligence. In fact, it has led to the emergence of the concepts of traditional media journalism and social media journalism. Traditional media tools/environments and social media tools/environments have significant differences when considered on the axis of news production, distribution, publication, permanence and reality. Among these elements, the reality of the news and the determination of the accuracy of this news is perhaps the most important element.

Table 5

Relationship Between Interaction Order and Fake News

Name	Interaction Order	Number of Fake News	
		Number	%
BPT Haber	101	4	9,5
DarkWeb Haber	144	4	9,5
Pusholder	211	7	16,7
ZAM Haber	274	9	21,4
23 DERECE	308	8	19,1
Aykırı	456	10	23,8

Table 6

Relationship Between Number of Followers and Fake News

Name	Number of Followers	Number of Fake News	
		Number	%
Pusholder	2.7 Milyon	7	16,7
DarkWeb Haber	1.4 Milyon	4	9,5
BPT Haber	835 Bin	4	9,5
Aykırı	783 Bin	10	23,8
ZAM Haber	699 Bin	9	21,4
23 DERECE	683 Bin	8	19,1

Fake news published in traditional media remains local or national in terms of impact. However, fake news produced and published through social media can reach every person in the world in a short time, this news can be accessed from anywhere and at any time, and fake news can be shared by those who read the news. This negatively affects the individual or the institution in particular and the society or the state in general. Fake news spread through social media can cause outrage in the society, put the state in a difficult situation and cause irreversible damage to the individual. Therefore, it is important to verify the accuracy of the news on social media. Likewise, it is also important that this verification is done both quickly and effectively and by using new technologies.

Based on this point, this study aims to determine the accuracy of the news shared on social networks using artificial intelligence technology. In this direction, with the AI-powered chatbot named "News Verification and Analysis Tool" which was personalised with algorithms in Chat GPT, the news shared by social media journalism accounts on the X platform were analyzed and their accuracy was determined.

The news analyzed by the AI-powered chatbot were analyzed and categorized through content analysis. According to the results obtained from the analysis, almost half (42%) of the news shared by social media journalism accounts on the X platform consists of inaccurate content. When the fake news analyzed in seven categories (satire or parody, false connection, misleading content, false context, imposter content, manipulated content, fabricated content) were examined, the most fake news was created in the "fabricated content" category. This is followed by “False connection". The results obtained by Coşkun (2023) in his research on social media and fake news are similar to the results of this study. In fact, the number of fake news in the category of fabricated content and false connection is at the top of the list. Likewise, the number of fake news in the satire or parody category is at the bottom of the list.

However, the number of fake news decreases as the interaction order of social media journalism accounts increases. In other words, as the interaction order of the accounts decreases, the number of fake news increases. In addition, as the rate of accounts sharing fake news increases, the interaction rate also increases. In addition, accounts with more followers share fewer fake news, while accounts with fewer followers share more fake news. The results obtained from Kazaz and Akyüz's (2019, pp. 91) research overlap with the results obtained from this study. In fact, in Kazaz and Akyüz's study which examined the level of fake news making by social media journalism accounts, it was observed that accounts with fewer followers made more fake news than accounts with more followers.

As a result, the chatbot, which is trained with algorithms using artificial intelligence technology to detect inaccurate content work accurately, efficiently, and quickly. However, it is noteworthy that the number of inaccurate contents in social media detected by the artificial intelligence tool is high. At this point, in future studies, finding alternative uses of artificial intelligence technology for fake news detection in social media and integrating the fake news chatbot into social networks will contribute to the field.

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