## Management & Economics Research Journal



ISSN 2710-8856 ISSN 2676-184X University of Djelfa - Algeria



https://www.asjp.cerist.dz/en/PresentationRevue/615

Vol. 05 No. 04 (2023).

P. 294-307

The impact of artificial intelligence on the labor market: the profession of journalist in the face of broadcasting robots and automated journalism

Nacereddine MAZARI Mazarinasro17@gmail.com University of Djelfa, (Algeria)

Received: 25/09/2023

Accepted : 29/12/2023

### Abstract

Artificial intelligence technology has begun to raise a lot of fear about the future of many jobs and professions. Despite the new qualitative characteristics that artificial intelligence technology offers in the field of improving services and their quality and increasing the rate of productivity, especially in economic institutions, it raises many questions about the fate of many professions and jobs, for example the profession of journalist, after the emergence of robot journalism, automated journalism, algorithmic journalism, and broadcasting robots.

In this paper, we will look at the nature of this fear in the labor market associated with the journalism profession and the resulting economic implications.

**Keywords:** Labor market. Artificial Intelligence (IA). Robot journalism. Automatic newsrooms. Journalist's Job. Human-Machine Interactions.

Author Nacereddine MAZARI

Title : The impact of artificial intelligence on the labor market: the profession of journalist in the face of broadcasting robots and automated journalism

#### **1. INTRODUCTION**

Artificial Intelligence (AI) is changing all viewpoints of communications and news coverage as programmed forms are being presented into all aspects of classical news coverage: examination, substance generation, and dissemination. Conventional human parts in all of these areas are being supplanted by programmed forms and robots. Media companies are progressively "employing" robot writers to find covered up patterns and bits of knowledge by analyzing tremendous information bases, and compose accounts without human inclusion. The extraordinary financial productivity of these robots can be anticipated to have a incredible request to the stockholders of these media companies. Seemingly, the presentation of AI and robots into conventional capacities of the writers, such as investigative news coverage and narrating, postures a genuine danger to the proficient future of human news coverage and its essential mission as gatekeepers of majority rule government. However, Artificial Intelligence has genuine restrictions, and these are making modern openings for human writers to flourish and compete with their robot competitors. In reality, in case caught on by writers, these confinements can engage instead of supplant them and other human substance makers. As Unused Media innovations and applications are changing the nature of the journalistic narrating to fit the requests of modern eras of media customers, the modern news coverage story can be anticipated to gotten to be a blend of innovations and applications that are past the capabilities of current AI robot writers.

#### 2. Research problem:

Nowadays, we live in a advanced world, in a society that's interconnected and offers unimaginable possibilities. Journalism may be a calling that's intensely dependent on innovation in this digital age. From gathering news to printing/broadcasting, innovation is in high request everywhere. The foremost captivating truth, in spite of the fact that, is that innovation is now not utilized to help news coverage; or maybe, they are on the verge of reshaping the ordinary news coverage hones. Manufactured insights (AI) can be seen conflictingly, fake insights on one hand, is insights that mirrors human insights to help it. However, it's this characteristic is presently standing in restriction to common or human insights. AI news coverage empowers computer program to produce news articles. Stories are produced naturally by computers instead of human columnists utilizing fake insights (AI) advances. These programs decipher, organize, and show information in ways that are reasonable to people. An calculation peruses tremendous sums of given information, chooses from a set of pre-programmed article structures, orchestrates key focuses, and embeds points of interest such as names, places, sums, rankings, measurements, and other insights. The yield can too be custom fitted to be composed in a particular voice, tone, or fashion. News organizations have started collaborating with calculations as of now to function and distribute software-generated news articles. Layouts are made utilizing journalistic however iterative forms that require monotonous manual labor. In spite of the fact that the innovation is still in its early development arrange, AI news coverage has begun making its way into newsrooms., **From this step, the question is asked**: What is the future of the journalist's profession with the development of the artificial intelligence revolution?

#### 3. Objectives of the research paper:

- Describe the current state of journalism and the use of artificial intelligence.
- Take a look at the impact of artificial intelligence in changing the practice of journalism.
- Identify potential implications of artificial intelligence on the future of journalists.

- Extrapolate ethical and professional challenges that may upset the practices of the journalism profession.

#### 4. Journalism Renewal And New Technologies

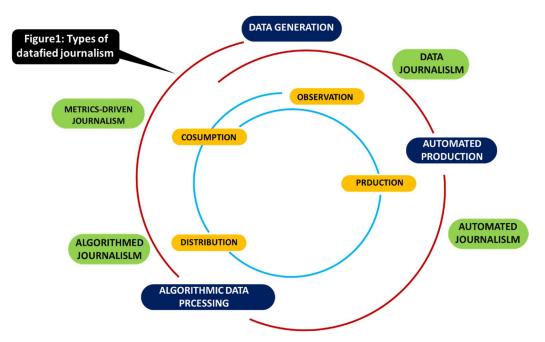
Innovation has ended up a genuine driving drive for the media segment to create unused computerized substance in line with the requests of Web clients. Consequently, ready to say that the sensational changes within the field of news coverage have associated straightforwardly to progressed innovation instruments . In this setting, a few authors adopt a positive and hopeful see of the driving part of innovation within the field of media and news coverage. Thus, the utilize of AI innovations has become an crucial portion of the field of media that must lead to radical transformations within the field of news coverage. In specific, this innovation was seen as an objective collusion to alter the professional hones of news coverage, beside changing journalists' aptitudes conjointly has ended up an basic component of the necessity of modern daily paper generation .

Be that as it may, ready to see that the innovative changes within the field of news coverage are inseparably joined with the change of the media environment. the advances- which involve communication advances, from composing to digital media-they produce situations that influence the way of life of on-screen characters utilizing them . In whole, within the age of the media meeting, mechanical abilities have gotten to be critical within the news coverage industry, which has changed news coverage by the digitalization of the work prepare in ways no one might have anticipated indeed some a long time back.

#### 5. Artificial Intelligence And Journalistic Practice

#### 5.1. Quantitative Turn in Journalism

The quantitative shapes have ended up more predominant in modern news coverage. In any case, these unused shapes of news coverage in spite of its relative oddity have drawn noteworthy consideration in scholarly writing and as of late gotten to be the center of impressive intrigued within the media segment. modern four shapes of news coverage (see Figure 1), which can be considered as change handle news coverage faces nowadays not as it were at the level of the essential stages of news generation and utilization but too influences news coverage at its center:



• **Data journalism**: This concept has steadily showed up in newsrooms over the final decade, which alludes to the method of extricating valuable data from information, composing articles based on the information and inserting visualizations within the articles that offer assistance perusers to get it the importance of the story : "advanced transformation has extended the supply and accessibility of information that can be utilized for computational journalistic forms, along side the desire of occasions to a bigger degree than some time recently. Be that as it may, information news coverage speaks to the merging of a number of areas which are critical in their claim right - from investigative investigate and insights to plan and programming.

• Algorithm Journalism: This sort of news coverage characterized as "the imaginative handling that happens at the crossing point between news coverage and information innovation".

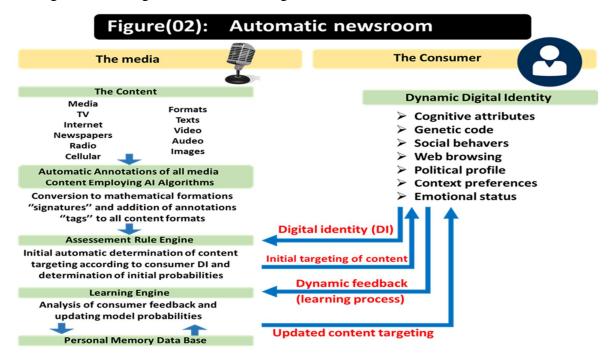
Other than, it can be "the combination of calculations, information, and information from the social sciences to supplement the responsibility work of news coverage".

• Automated Journalism: The center with this term is the expanding amount of substance that's being created naturally and by implies of innovations being created by suppliers of robotized substance arrangements. In other words, "algorithmic forms that change over information into account news writings with constrained to no human intercession past the starting programming".

• Metrics-Driven Journalism: Alludes to the changed endeavors to form sense of an evergrowing sum of audiences' advanced follows with the potential to impact decision-making forms at all organize of the news generation handle.

#### 5.2. Automation and Newsrooms

There's no question that AI is continuously spreading through multi-creative circles counting news coverage that as of now has been affected, particularly in light of tireless financial disturbance and the advanced change. In this regard, ready to say that the advancement of fake insights procedures drastically reshaped newsrooms, specifically into all angles of news generation and dispersal as seen within the figure(02). Encouraged by progresses in robotized substance generation, innovation is influencing news coverage at its center: news generation.



Nowadays, perusers can examine articles composed totally by a writer who does not have a human shape. In this setting, the Washington Post has created its claim innovation, an fake insights called" Heliograph ", to back its publication group amid the 2016 Summer Olympics in Rio. Since at that

point, the Washington Post has been utilizing "Heliograph "to spit out 850 articles, which centered primarily on political and sports news. In a later Reuters report "Media, Patterns and Innovation Desires in 2018", which included a

study of very some media outlets, about three-quarters of respondents said they utilize manufactured insights in their generation. On the other hand, they too create ventures to boost their utilize both in terms of substance change, expanded promoting proficiency and financial achievability, robotization of data approval inside the data fabric, or to speed up the classification of information contained inside a enormous stream of information.

In whole, the relationship between innovation and substance creation in cutting edge newsrooms is synthesized within the taking after fundamental thought: "This propensity in news coverage demonstrates the changing character of the newsroom staff, where software engineers are working relentlessly more closely with writers, and where writers ended up software engineers and bad habit versa.

#### 6. Newsmaking And Artificial Intelligence:

By connecting counterfeit news coverage and insights (AI), in numerous cases the projection of conceivable intuitive between the two has been restricted to consider, in a prohibitive way, the utilize of what is called frail (or limit) AI, as newsmaking is drawn closer as the movement of a machine that as it were executes modified activities. Suggestion is situated, be that as it may, to be executed with solid (or common) AI, which is the one that alter machines so that they copy the way in which human prepare data and indeed to be able to respond in arrange to supply arrangements.

Al, as a entire, has advanced from being connected in purely-reactive machines –which did not indeed learn around themselves-, to machines with the capacity of putting away, but on a transitory premise, and making choices based on their encounters. The another step is to grant them the capacity of self-knowledge and potential to extend themselves in future activities; that's to say, Al to program objects able to get it alien emotions and show claim feelings. It may be known as the application of the hypothesis of intellect, as they have the human capacity of translating conducts through mental states, as well as claim and outside sentiments to anticipate practices.

AI application in Communication coincides with the boom of computerized situations that are the result of universalization of gigantic get to to the Web that duplicate the plausibility of getting, spreading and handling information. Web incites the rebuilding of the media, the development of unused stages, cybermedia and the joining of hypertextuality, interactivity and mixed media to the

299

journalistic profile. Parallel to changes in items and stages, the innovative advancement enters in substance creation and composing of news based on calculations to be produced by computers.

Characterized as an limited set of particular graphic rules, calculations are the deliberation of a step-by-step strategy that takes an input and deliver a result to achieve a characterized item . Connected to news coverage, calculation definitions can prioritize, classify and channel data and indeed be connected as measurements for dissecting groups of onlookers, for deciding coverable subjects and for composing stories concurring to the gotten data in databases.

Applied to journalism, algorithm formulations can prioritize, classify and filter information and even be applied as metrics for analysing audiences, for determining coverable topics and for writing stories according to the obtained information in databases.

The utilize of calculations permits machines to independently produce literary and realistic journalistic items from information. "Once created, not as it were can calculations make thousands of news stories for a specific subject, they moreover do it more rapidly, cheaply, and possibly with less blunders than any human writer. [...] Inside this setting, calculations are able to create news speedier, at a bigger scale, and possibly with less blunders than human journalists". Push that refinement by guaranteeing that the mechanized era of news is the result of the crossing point between news coverage and huge information. In his conclusion, computers may be utilized to recover data, and information mining forms may be utilized to find unused information of structured and unstructured arbitrary information silos and permit , too, in arrange to total the method, the presentation of interactivity with buyers.

The development of computers in news-content creation goes past digitisation of newsrooms. The root of robotized era of news is connected to information news coverage and based on computer-assisted detailing (CAR), which served as a beginning point of what got to be known as exactness news coverage, characterized by Meyer as the application of social investigate and conduct strategies news coverage through the in-depth investigation of databases, studies, and a common blend of computing and social sciences.

The advancement from an calculation for examining to an calculation for writing was favored by the semantic web and the application of AI for the capacity and preparing of information, since "data and data-driven news coverage emphasizes finding stories in information sets, whereas computational news coverage emphasizes the consolidating of computing and journalistic values in device creation and strategy application".

#### 7. AI Confinements: New Opportunities For Human Journalism

AI is based on a sound demonstrate, which infers that modern data that does not diminish vulnerability "beyond the level of chance" is rejected by fake neurons. The judicious forms we have examined over, in any case, put an upper constrain to inventiveness at the transformational level of which a human is competent. Since AI calculations cannot "think" out of the conceptual system made for them by their human calculation architects, they are incapable of accomplishing the most noteworthy level of inventiveness that requires the capacity to rationally cross into unused unforeseen conceptual systems.

The current restrictions of AI, in any case, highlight the points of interest of human writers and make critical openings for them:

• AI calculations cannot get it or express complex human feelings and social values in computational terms as essential for investigation by AI calculations.

• AI calculations are restricted within the level of imagination that they can create, for a few reasons. To begin with, AI calculations cannot mimic human brain forms that include neurobiological chemical forms specifically connected to human imagination. AI calculations are kept to syntactic images that have no semantic meaning in themselves. Moment, in spite of the fact that AI calculations work basically inside the insights and information extension domain and can be anticipated to create an "astronomical" IQ level, inventiveness isn't straightforwardly related to IQ levels past a certain limit. Third, tall level human imagination and disclosure are specifically related to subliminal, instinct, envisioning, suddenness, and passionate insights. All of these forms are too connected to "irrational thinking". AI calculations designers are not as however able to create calculations that incorporate these exceptionally human capacities critical to inventiveness. Fourth, inventiveness is regularly related with human experience and hazard taking (which is additionally related to the human survival intuitive). It'll be exceptionally complex to program these human capabilities into an AI fake brain.

• One of the foremost vital capacities of human news coverage is to caution society to potential dangers related with natural and social changes to the survival of the social framework. AI calculations can offer assistance humankind screen, on a huge scale, wonders that will debilitate humankind but such monitoring is performed inside predefined records. AI calculations cannot be anticipated to get it and screen startling disturbing advancements: They need the human capability to create associations not already experienced. Additionally, AI calculations will not alarm society to

potential disasters of AI itself, or the potential physiological harm to the human brain due to the presentation of AI into all perspectives of human lives. This is often a major issue that future writers must continually investigate and address.

• AI calculations are intrinsically impacted by the values and predispositions of their creators and researchers. It is the part of long haul human writers to get it the models of these calculations and programmed forms and distinguish their inadequacies.

• Because the currentlevel of Contract AI calculations have constrained understanding of human normal dialect, particularly the setting of the thoughts, representations, humor, and verse, robot writers are incapable to "write" stories whose profundity and abundance go past a "bureaucratic level". Such stories will essentially be void of the sympathy and understanding of complex social settings, of which human writers are competent.

• AI calculations need the capacity to compose conclusions. They can create modern information (after approval) but they cannot change over information into approach recommendations or recommendations for alter.

#### 8. Robot As News Reporters:

Robots are progressively being utilized as news correspondents in particular applications, especially for straightforward or data-driven stories. With progresses in characteristic dialect handling (NLP) and machine learning, robots can presently produce essential news stories from information sets or pre-written formats.

In this setting, robots are utilized to robotize announcing clear news stories, such as sports scores, climate reports, or budgetary news. The information is encouraged into the robot, which analyzes and summarizes the data into a news article.

Whereas robots can be successful at producing essential news stories, but they cannot supplant human columnists in complex or investigative detailing. Human writers can inquire basic questions, conduct interviews, and give setting and examination that robots cannot do.

Also, robots cannot empathize with sources, get it the subtleties of dialect and culture, and recognize moral and lawful contemplations inborn to news coverage. These aptitudes are significant to creating high-quality news coverage that's enlightening, adjusted, and responsible.

Whereas robots may be valuable in robotizing certain perspectives of news announcing, they are likely to supplant human writers at some point before long. Or maybe, robots and AI are more likely to complement and help human writers in their work, empowering them to center on more complex and nuanced announcing perspectives, whereas the robots handle the more schedule errands.

#### 9. Algorithmic Journalism And The Audience:

Algorithm and the audience Today's, presentation and integration of the unused innovation into a normal media association does not require that everyone utilize it, in any case, they do . The competition among media organizations has come about within the economizing and expanding of their items and administrations. The utilize of calculations empowers following clients utilizing the information they take off behind in arrange to tailor their news for them . But in this case we ponders on the off chance that the news organizations will take duty for the story or in the event that the robotized innovation will accept obligation?.

Writers claims that their innovative instruments are gathered to spare them time but, at times, they don't. The stack and weight on writers powers them to distort their item. On beat of that, more current innovations are continually driving economic and organizational moves within the work environment . Presently, with the development of online journalism, there are 11 however more current changes within the schedules of journalistic assignments and hones. Writers can presently create intelligently, customized, hypertextual, and interconnected detailing. We have a "better shape of journalism". In this way, 'roboticizing' media outlet points to help writers to do more news coverage and prepare less information. Robots take no occasions, miss no due dates, and create well investigated substance, indeed learning from their possess mistakes along the way.

Robotized news coverage has the capacity to fine-tune the news by 'harvesting' substance criteria from the consumer's computing environment. In fact, this seem impact a channel bubble, of sorts. However, summarising such crude information into words might be parlayed into an gigantic esteem, such as within the case of, Extraordinary Call Connect, an application benefit utilizing Normal Dialect Era (NLG) created for the families of elderly individuals to gather data approximately them and summarize it, counting area data straightforwardly from open GPS sources.

#### **10.**The Ethics Of Automated Journalism:

Robot news coverage is here, nowadays, in a unmistakably quantifiable way. On the other hand, in any case, and in arrange to confront the moral challenges characteristic in algorithmic news coverage, there are numerous reasons why robot news coverage cannot totally supplant writers. More so, robotized news coverage cannot make the essential air to rouse readers' passionate responses, such as giggling, or to catalyse a auxiliary activity, and so on. Not one or the other can robots be imaginative. They cannot go out and conduct interviews with individuals, for occurrence. We know that organizations, and not their robots, must be held mindful for any computerized botches. Another

challenge is that robots cannot recognize between the information from news and from promotions and showcasing.

The full thought behind mechanical news coverage is to free writers from their schedule errands, such as the ordinary, dreary activity of creating profit reports. Human writers ought to still endorse the particular sources from which robots ought to gather their information to anticipate them from counting insignificant sources..

#### **11.Impacts Of Algorithmic Journalism On Work:**

In this segment, we'll examine the impacts of algorithmic news coverage on work. We are going analyze these impacts inside a system comprising of three levels: supplanting assignments of writers, expanding proficiency, and creating unused capabilities inside the news coverage. Algorithmic news coverage can take over a few assignments like creating climate reports and sports stories. This taking over, be that as it may, does not compare to work misfortunes of writers. Within the brief term, the concern almost unemployment appears improbable since these calculations are utilized by people entering information, handling models (i.e., NLG rules or measurable rules, etc.), or checking models; in this manner, they are not free of people. The Related Press too famous that "algorithmic journalists" have not caused any human work misfortunes so distant.

As for expanding productivity, algorithmic news coverage may diminish the time and costs for the creation of news reports. Besides, calculations can analyze a tremendous sum of information to produce news; hence, they can create a parcel of news, such as wear news, monetary news reports, wrongdoing reports. As result, it is conceivable to distribute stories that something else would not have been composed. On the other hand, writers sharing their workload with the algorithmic writers may have more time for more imaginative assignments, or for errands like checking the news created by calculations. In this way, collaboration of writers with algorithmic writers may increment the amount of news reports. At last, algorithmic news coverage may bring with it a few modern capabilities into current news coverage hones. For illustration, on the off chance that Scribe or comparative apparatuses to be created are open to open utilize, this may lead to a change in news coverage from news composed by writers in newsrooms and distributed to everybody to more person preferences-oriented news.

#### **12.**Freedom Of The Media And Artificial Intelligence:

Developing innovations give phenomenal openings for working out free discourse and media flexibility. Counterfeit insights (AI) plays an critical part in changing how individuals communicate and how they devour and lock in with media substance. AI offers engaging arrangements to channel

and rank the apparently interminable user-generated substance and data online . As numerous innovative headways, AI has the potential for great, but can too posture a honest to goodness danger to human rights—in specific, free discourse and media flexibility.

In spite of no all around concurred definition, "AI" is routinely utilized as an umbrella term for robotized, data-driven forms . AI apparatuses may be straightforward, human-designed enlightening; others are more advanced and incorporate machine learning. As AI is based on plans and information given by people, its yields are unavoidably molded by social values and subjective encounters and convictions, counting inborn inclinations.

A few states convey AI to unlawfully surveil citizens and control open communication in ways conflicting with universal human rights law. Empowering unparalleled conceivable outcomes for reconnaissance, AI can encourage censorship and implies to smother disagree and free news coverage, both online and offline. Subsequently, a few states utilize AI to coerce the press and, eventually, to fix advanced dictatorship.

Besides, private performing artists, in specific suppliers of look motors and social media stages, apply AI to channel substance in arrange to distinguish and evacuate or deprioritize "undesired" substance, known as substance control, and to rank and spread custom-made data, alluded to as substance curation. Both applications direct discourse with the deliberate to encourage online communication, give user-friendly administrations, and, significantly, increment commercial benefit.

AI-powered sifting and positioning of substance is empowered by the observation of client conduct at scale. To assess and foresee the "relevance" of substance, AI requires broad, fine-grained information. These information moreover encourage promoting, which is the premise of numerous web intermediaries' commerce show.

Any purposefulness utilize of AI to meddled with autonomous reporting—be it through focused on censoring, unavoidable reconnaissance of investigative writers or utilizing AI-driven bots to assault and quiet person journalists—is a genuine danger to media opportunity. Indeed without awful confidence, in any case, the generally utilize of AI to screen discourse to confine certain substance or spread data involves significant dangers. Whereas numerous of the center questions around substance expulsions and curation are not one of a kind to AI, utilizing AI to shape and direct data at scale worsens numerous existing challenges and gives rise to modern ones. The taking after areas investigate the sending of AI in substance balance and curation, counting its potential impacts on free discourse and media flexibility.

# **13.**Three Characteristics Of Artificial Intelligence That Can Be Exploited In Journalism And Media:

**A.** Artificial intelligence incorporates a tall scope of improvement to help the field of news coverage but its capacity to totally supplant the request for human insights is still beneath investigation. Thus, AI ought to be seen as an help to human cognitive staff not a substitute for it.

**B.** AI can increment the scope of media and news coverage by giving its administrations within the areas with data-exhausted data and detailing. For case Fund, outside trade, or indeed operations for that matter. It can be a valuable instrument with respects to expanding the exact detailing of objective information with the most reduced level of scope of mistake.

**C.** ournalists nowadays must always make strides their capacity to provide substance that offers to the public not as it were candidly but moreover imaginatively since their competition nowadays isn't fair with their partners but moreover with an insights made by one of their kind.

#### 14. CONCLUSION:

Finally we say: in spite of the fact that AI-generated substance passes on the message more effortlessly, be that as it may, human-computed substance is more sincerely engaging and more lucid. AI and innovation nowadays are making strides at a pace speedier than human advancement. Typically a boon for human society or a bane as it were time will tell. AI has begun making critical commitments to the field of Media and news coverage and is including esteem in numerous measurements. News organizations have started to collaborate with calculations to function and distribute software-generated news articles, but they still have a long way to go. The concepts of objectivity and subjectivity stand on the sides of AI and people individually whereby the quality of the previous is the shortcoming of the last mentioned. It can be concluded that in logical and data-driven areas, the advancement of science within the shape of AI can take the mantle from human writers. But the subjects and things of social science which talk about theoretical thoughts will still demand the administrations of human insights over fake insights. So as to donate special bits of knowledge and concepts which mix the minds of people since the creation of substance can be fake but its utilization will continuously be subordinate on human insights.

Author Nacereddine MAZARI	Title : The impact of artificial intelligence on the labor market:
	the profession of journalist in the face of broadcasting robots
	and automated journalism

#### **15. Bibliography List :**

1. Ayse Dalgali, Kevin Crowston (2020), Algorithmic Journalism and Its Impacts on Work, Conference Paper algorithmic content generation models and discusses the impacts of algorithmic journalism on work within a framework consisting of three levels: replacing tasks of journalists, increasing efficiency, and developing new capabilities within journalism, Syracuse University, Texas.

2. Barbora Bukovska (2020), Spotlight on Artificial Intelligence and Freedom of Expression, Wallnerstrasse 6, Vienna.

3. Bharat Dhiman (2022), Usage of Whatsapp Among Students of Kurukshetra University: A Case study, University of Science and Technology, Faridabad, India.

4. Carlson M (2015) The Robotic Reporter: Automated journalism and the redefinition of labor, , Journal of Digital Journalism, Vol3(3), UK.

5. Dhiman Bharat (2023), Does Artificial Intelligence help Journalists: A Boon or Bane?, University of Science and Technology, Faridabad, India.

6. Diakopoulos N(2015), Algorithmic accountability Journalistic investigation of computational power structures, Journal of Digital Journalism, vol3(3), UK.

7. Eirik Stavelin (2013), Computational Journalism When journalism meets programming, University of Bergen, Norway.

8. European Commission's (2019), A Definition of AI Main Capabilities and Disciplines".

9. Henrik Örnebring (2010), Technology and journalism-as-labour: Historical perspectives, Sagejournals, Vol11(1), India.

10. Julia Haas (2020), Freedom of the Media and Artificial Intelligence, Global coference for media freedom,16 november 2020, Office of the OSCE.

11. Miguel Túñez-López, Carlos Toural-Bran, Cesibel Valdiviezo Abad (2019), Automation bots and algorithms in newsmaking: Impact and quality of artificial journalism, Revista Latina de Comunicación Social, vol74, Madrid.

12. Ronald Deibert, Xiao Qiang, Steven Feldstein, Larry Diamond (2019), The Road to Digital Unfreedom, journal of democracy, Maryland, vol30(01), United States.

13. Sena Aljazairi (2016), Robot Journalismthreat Or An Opportunity, Örebro University, Sweden.

14. Waleed ALI, Mohamed HASSOUN (2019), Artificial Intelligence and Automated Journalism: Contemporary Challenges and New Opportunities, Journalism and Mass Communications, Vol5(1), India.