



A study on Algorithmic Journalism and its impact on the Newsroom in Sri Lanka (specifically for the newspaper media)

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ABSTRACT

The study seeks to assess the influence of Artificial Intelligence (AI) Algorithmic Journalism on news production in the newspaper industry in Sri Lanka, thereby filling a gap in empirical studies within this context. With the rapid development and expansion of Digital Media, various AI applications, including Automatic Content Generation, Data Journalism, and Natural Language Generating (NLG), are affecting news production. However, little is known about the implications for Sri Lankan Media Professionals in this context. The study is based on a quantitative study that used a structured questionnaire for 100 media professionals working in newspaper institutions in Sri Lanka. The results were analysed using SPSS for quantitative analysis and NVivo for qualitative patterns in the use of AI tools. The results show that the study established that the adoption and influence of AI on news production in Sri Lanka is moderate to high, at 70%, while the study also established that the levels of awareness among Media Professionals in Sri Lanka were mostly moderate. Furthermore, the regression analysis has proved the significance of the model, with an R^2 value of 0.539 and significance level of less than 0.001. This points to the fact that perceptions of AI, such as job threats, productivity, and content originality, along with project rates, are significant factors in the determination of professional roles. The research has also pointed out the dual perception of AI, where it is considered both an efficiency enhancer and the source of professional uncertainty. The analysis of the data using NVivo has pointed out the high concentration of AI tool usage, with ChatGPT being the most dominant. Variations in the adoption of AI tools are also visible, with higher adoption rates being found in the cases of designers and technical staff compared to journalists. English proficiency is also an important factor. However, AI has not replaced human creativity, but has remodelled it in the media sector



1. Introduction

Artificial Intelligence (AI) is considered a powerful technological development that is rapidly expanding in various fields of human society in the technological revolution of the 21st century. AI can be described as the process of developing computer systems that can perform activities similar to Human Intelligence. This technology has been widely used in many global industries as it can perform tasks such as Data Analysis, automated decision-making, Natural Language Generated (NLG) and pattern recognition very efficiently. Another important field where the impact of this technological transformation is directly seen is Journalism.

“Although the application of innovations as a tool of technological, social and economic developments in different areas of practice is not always met with positive feedback and understanding, the media segment represents a space in which changes are adapted relatively quickly. Thus, media institutions are becoming pioneers in the implementation of technical and technological innovations while helping to adjust them to society on the one hand, and using of modern achievements to further improve them on the other hand” (Višňovský et al., 2019).

With the proliferation of Digital Technology, the Internet and social media, the structure of the media industry and the news production process have changed significantly. AI has emerged as a transformative technological advancement that is reshaping various sectors of society, including the media industry. In recent years, the integration of AI into Journalism has significantly changed the processes of news gathering, production, editing, and distribution. Concepts such as Automated Journalism, Algorithmic Journalism, and Data Journalism have received increasing scholarly attention, reflecting the growing role of AI in redefining the nature of journalism and newsroom practices.

AI is one of the most promising innovative frameworks that has the potential to transform our relationship with technology. In Journalism in particular, AI is beginning to permeate the news production process and the structure and functioning of the media. Accordingly, Journalism is already undergoing a process of change as a result of this Digitalization. It is being further accelerated by the use of Algorithmic Journalism (AJ) based on AI. With the advent of AI in Journalism, a number of significant changes have begun to occur in that process, and these changes can be easily seen in the scope of responsibilities performed by Journalists, the technology of news generation, and the interaction with readers.

In particular, new media trends known as Automated Journalism or Algorithmic Journalism, which use Computer Algorithms to produce news, have come into use in many media organizations around the world today. AI systems are being used to automatically produce content such as Sports Journalism, Stock Market Reports and Data-Driven News. The research paper AI in journalism (2023) shows that using Algorithmic Journalism based on AI can fulfill three main roles in a media organization:

Deeply Investigation, Media Content Production, and Media Content Distribution (Heesen et al., 2023).

But this process has increased the speed and efficiency of news production, and it has also raised many questions about the professional role and professional standards of journalists. Journalism is considered an important democratic institution in society and is also described as a professional activity based on truth, independence, responsibility and ethics. Therefore, the professionalism of journalists is based on fundamental principles such as providing truthful information, fulfilling social responsibility and upholding ethics. However, there is an academic debate about how these professional principles may change when AI technology is integrated into the news production process. In addition, the increasing reliance on AI technology also raises questions about journalism, including issues of reliability, authenticity and editorial independence. This may challenge traditional journalistic values such as accuracy, objectivity and accountability by reducing human intervention in news production processes.

The impact of AI and algorithmic journalism is currently taking place in the local media sector. With the advancement of the digital revolution, the media sector in Sri Lanka is also changing rapidly. Especially the newspaper media sector in Sri Lanka. The use of AI is also growing, especially in online news websites, social media news and digital media. This also creates another challenge for the job security of journalists. However, research on the impact of AI developments on the professionalism of journalists in Sri Lanka is still in its early stages. There is also a lack of research on the impact of AI technologies on the roles, duties and ethics of journalists in the local media sector. Therefore, the main objective of this research is to investigate the impact of algorithmic journalism and AI on the news media sector in Sri Lanka, especially the newspaper media sector. By examining the use, application and implications of AI technologies, this research aims to contribute to the existing body of knowledge on the subject and provide insight into the changing dynamics between AI technologies and the news media sector in Sri Lanka.

The rapid development of artificial intelligence (AI) and algorithmic technology (AT) has greatly changed the media landscape of the entire mass media industry, including the global newspaper industry. Therefore, a new field has emerged as algorithmic journalism (AJ). Algorithmic journalism (AJ) can be simply described as the use of automated systems, data-driven tools and AI for the production, editing and distribution of news. Technological developments have also created important issues regarding the professionalism of journalists, ethical standards and the quality of media work.

Furthermore, the use of algorithmic systems (AS) can have implications for media values such as accuracy, objectivity, accountability and gatekeeping. Issues such as editorial control, algorithmic bias and algorithmic content generation can present

ethical challenges to journalists. Thus, this research attempts to fill this gap by examining the impact of artificial intelligence-based algorithmic journalism on the news media in Sri Lanka. More specifically, this research aims to identify the level of awareness of AI-based algorithmic journalism among journalists in Sri Lankan newspapers, assess the level of use of AI-based algorithmic journalism in newsroom practices, assess its impact on newsroom efficiency and productivity and finally assess its implications for journalism professionalism. This specific research is informed by a general hypothesis. That is, AI-based algorithmic journalism has a significant impact on newsroom practices in Sri Lankan newspapers. Therefore, this specific research aims to identify how artificial intelligence technologies are changing the processes of journalism.

2. Literature Review

Today, journalism is more integrated with technology than any other profession, with a unique and powerful impact. Computer technology has always been a valuable tool for a professional journalist. Over the past 10 years, it has also helped to increase the productivity of the field of journalism. But this technology has now been combined with AI and has been able to turn the entire media sector upside down. The entire media profession, from the creation of media content to its distribution, has been subjected to convergence.

2.1. Introduction to AI and Algorithmic Journalism

Various terms are used to describe the use of AI technologies in journalism, such as AI journalism, Automated Journalism, and Robotic Journalism. But Artificial journalism or Automated Journalism, Algorithm Journalism, Robot Journalism or Computer-Assisted Reporting, Augmented Journalism and Data Journalism or Data-Driven Journalism is an emerging reality that has yet to be studied, although it is altering the ways in which information is obtained, stored, processed, transmitted and consumed (Túñez-López et al., 2021, p177). The term Automated Journalism is defined as any process or process under the control of media or electronic devices that can be carried out without any external influence.

“Among others, Artificial Intelligence (AI) is one of these technologies that has the capacity of constituting a landmarking change. Artificial Intelligence is a broad concept encompassing a variety of technologies and methodologies, each with unique capabilities and restrictions” (Zaragoza, 2023, P5). This can be described as journalism in which a program converts data or a database into a newsworthy narrative with limited or no human input. The term Robot Journalism is not used for this purpose, as it implies physical robots. However, this also coincides with a type of Robotic Journalism.

‘Algorithmic news’ refers to news reports generated by Algorithmic Journalism. “Currently, the term is mostly associated with ‘Machine Learning’ (ML), which has the learning capabilities associated with ‘Human Intelligence’ and

is also capable of learning and improving its analysis using computer algorithms.” (Zaragoza, 2023, p5).

Many of the fundamental aspects of the newspaper industry have been redefined. The introduction of new and innovative technologies such as AI and Natural Language Generation (NLG) is partly responsible for this transformation. “This is because it creates a lot of new opportunities, especially in the production of news, as well as in the distribution, collection and consumption of news” (Dörr 2015). Historically, this has been driven by the rise of computerization and automation.

AI-based journalism is having a significant impact on human resources and the journalism profession. It is integrating new journalistic processes into newspaper production. At the same time, it gives reporters the freedom, space, and time to investigate and find connections. The main technology used in AI-based Algorithmic Journalism is a subfield of natural language processing, which describes a software process that translates structured data into human (natural) language. This impact of AI-based Algorithmic Journalism occurs in journalism in three ways.

- I. Replacing the work of journalists.
- II. Increasing efficiency.
- III. Developing new capabilities in journalism.

Algorithmic media technology based on AI has revolutionized journalism by allowing individual users to produce their own stories. But there are several reasons that are put forward by those who argue that this method is not appropriate. These include:

- I. News is not subject to a gatekeeping process.
- II. Issues of accountability and impartiality in news.
- III. Ethical considerations regarding the transparency of algorithms based on AI.
- IV. The changing role of these agents in the spread of fake news and misinformation.

2.2. The history of using AI in the media sector

The early 2000s saw the birth of automated content generation in journalism. Algorithms were developed to produce simple reports such as weather updates, sports summaries, and financial news. The introduction of natural language generation (NLG) technologies was a significant step forward. NLG allowed data to be transformed into readable narratives, a primitive form of Automated Journalism. This period marked the beginning of AI's role in reducing the workload of journalists in producing typical news reports. “From the mid-2000s to the 2010s, machine learning algorithms became integral to journalism. These algorithms could sift through large datasets, identify patterns, and even predict trends, proving particularly useful for investigative journalism. This era also saw AI tools being used to analyze trends and public opinion on

social media. Journalists began to rely on these tools for insights into public sentiment, which helped uncover emerging stories and understand audience reactions” (Amponsah & Atianashie, 2024).

The beginnings of automation in journalism date back to the technological transformation of newsrooms and broadcasting over the past three decades, and have intensified in recent years. “Since the end of 2022, several tools have emerged that can influence the work of journalists. For example, avatars created by artificial intelligence have been developed. In 2006, a definition given to avatars stated that it is “a digital model of a person (Stănescu, 2023, p258).

Also, despite the fact that the first data-generated software was created more than 40 years ago, it has been currently discussed in terms of its implementation in journalistic practice, mainly due to the effective interconnection of informatics, statistics and the newspaper business. In 2014, the American Associated Press reported that more than 3,000 of its news items were generated by ‘robots’ in a year. They included especially flash news from sports events. While previously used in weather forecasting, medical data processing or financial reporting, intelligent software today produces texts that are indistinguishable from those created by journalists. Tobi software made more than 40,000 reports in German and French language during the November 2018 elections in Switzerland. The BBC expects to have generated 90 % of news texts by intelligent software by 2022 (Višňovský et al., 2019, p.170).

Established news organizations such as BBC, CNN, and Thomson Reuters have indicated that they will increase demand for automated journalism over the next couple of years. According to research carried by Devon Kim and Seongcheo Kim in 2018, profitability is a key factor affecting journalist roles, along with the market environment in the automated journalism domain (Jain et al., 2026)

Accordingly, research on the relationship between AI and journalism has grown rapidly in the past few years. With the development of AI technology, concepts such as Automated Journalism, Algorithmic Journalism and Data Journalism have developed and are changing the nature of journalism itself. This research has investigated how AI technology is changing the nature of journalism, the news production process and the professional role of journalists. However, empirical research on this issue related to the Sri Lankan media sector is limited. Therefore, investigating the impact of AI development on the professionalism of journalists in Sri Lanka becomes a fundamental need of this study.

3. Methodology

The research design, approach, sampling techniques, and data collection methods used to investigate the impact of AI-based algorithmic journalism on newsroom practices in Sri Lankan

newspaper institutions and the professionalism of journalists working in newspapers are discussed here. Accordingly, this research mainly uses a descriptive and analytical research design. In it, the quantitative data collection method has been used as the data collection method of the research.

The primary focus in selecting the target population for this research was newspaper journalists, reporters, editors, designers, sub-editors, and content creators working in the newsrooms of newspapers in Sri Lanka. Reflecting the convergence of media practices, 100 journalists working in a wide range of media and creative roles, including editorial, digital media, design and technical roles, were included in the sample under the purposive sampling method. The selected group was administered a structured questionnaire and data were collected through an online method.

3.1. Theoretical Framework: Diffusion of Innovation Theory

The major theoretical framework of this research is based on Everett Rogers’ Diffusion of Innovation Theory, which focuses on the adoption, communication, and diffusion of new technologies and innovations within a social system. The theory highlights major aspects of diffusion, including innovation, communication channels, time, and the social system. It also focuses on different aspects of adaptation, including innovators, early adopters, early adopters, late majorities, and laggards.

In this research, algorithmic journalism and AI tools are regarded as new technologies or innovations in the media industry of Sri Lanka. This theory is more applicable in understanding the use of AI tools among journalists. As indicated in the research data, some media workers are using AI tools in their day-to-day activities, while others are not even aware of AI tools or are resisting their use. This is in line with Rogers’ theory, which states that journalists are adopters of new technologies, but their willingness and ability to adopt new technologies are different.

Moreover, this theory would enable us to understand the factors affecting the use of AI in journalism, which include the perceived usefulness and ease of use of AI tools by the journalists, as well as the support from the organization and the profession. This theory would also enable us to understand the diffusion of AI technologies among various media outlets in Sri Lanka. Thus, the innovation diffusion theory would enable us to understand the integration of algorithmic journalism and its impact on the professionalism of journalists.

4. Results and Discussion

The data analysis was done using the Statistical Package for Social Sciences (SPSS) software. Descriptive and inferential statistical methods were used to analyze the data. Descriptive statistics were used to analyze the demographic details of the respondents and their awareness of AI and its use in newsrooms.

Inferential statistical methods were used to find the relationships between variables related to AI and its impact on newsrooms and professionalism. Regression analysis was used to find the relationships between variables.

The chapter is divided into different sections, which begin with the analysis of demographic characteristics, followed by the analysis of AI awareness and usage. Next, the analysis of AI's influence on productivity, job roles, and professional practices is discussed. Finally, the regression results are provided, which help in testing hypotheses and understanding the significance of different variables' relationships.

4.1. Demographic Profile of Respondents

Table 1: Demographic Profile

Age	Fq	Percentage (%)	Higher Education Level	Fq	Percentage (%)
Under 25	20	20.0	Secondary School	4	4.0
25–34	50	50.0	Diploma	22	22.0
35–44	20	20.0	Undergraduate	24	24.0
45–54	8	8.0	Graduate	32	32.0
55+	2	2.0	Postgraduate Degree	10	10.0

Gender	Fq	Percentage (%)	Ability to work in English	Fq	Percentage (%)
Male	74	74.0	Excellent	12	12.0
Female	26	26.0	Good	64	64.0
			Fair	24	24.0

Source: Survey Data: 2025

In this study, the demographic characteristics of respondents based on age, gender, and educational levels were examined to help in better understanding the sample population. From the age distribution, it is evident that most respondents belong to the 25-34 age range, at 50%. This suggests that the sample is largely comprised of young and active members of society, likely to be actively engaged in the media industry. However, 20% of respondents are below 25, and another 20% belong to the 35-44 age range. This suggests a fair and balanced sample population comprising early and mid-career members. However, only 8% and 2% of respondents belong to the 45-54 and 55+ age ranges, respectively, suggesting little or no representation from this age range.

In terms of gender distribution, it is evident that males dominate the sample, at 74%, while only 26% of respondents were female. With regard to educational attainment, it is clear that the sample population is well-educated. The majority of them hold graduate qualifications, followed by those who hold undergraduate qualifications and those who hold diplomas. A smaller percentage of them hold postgraduate qualifications and professional qualifications such as NVQs. Only 4% of them hold secondary qualifications as their highest educational attainment. This shows that the sample population is highly educated in terms of background. This is an important factor in analyzing their perception of AI in the media industry.

On the whole, it is clear that the demographic characteristics of the sample population indicate that it is young, mostly male, and well-educated. All these factors could influence their attitude towards embracing technological innovation in the media industry.

4.2. Regression Analysis

Table 2: Regression Analysis of AI Impact on Newsroom Efficiency

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.734 ^a	.539	.407	1.315	.539	4.091	14	49	.000	1.968

a. Predictors: (Constant), Project rates/fees, AI is reshaping the way media content is created., AI threatens traditional design jobs., Human creativity is irreplaceable in design, AI improves design speed and efficiency., AI-generated content lacks originality, Monthly income/salary, AI helps improve productivity in media-related tasks., AI integration leads to job losses in the sector, AI is transforming the creative design industry., AI reduces the need for human creativity., Client demand, AI poses a threat to creative jobs in the media., Freelance income

b. Dependent Variable: What is your role in the Sri Lankan media sector?

Source: Survey Data: 2025

The regression model presents considerable academic value by illustrating empirically the combined influences of various technological and economic factors on professional roles within the Sri Lankan media industry. By incorporating variables based on perceptions of artificial intelligence (AI) influences on creativity, productivity, and job security, combined with various economic factors like income levels and client demands, the

model adds to the cumulative knowledge base in media studies, technological change, and the effects of AI-based labor changes. The explanatory power of this model ($R^2 = 0.539$) suggests that over half of the variance can be explained by these combined influences, illustrating the structural effects of technological change based on AI adoption.

Moreover, this research also contributes to the field by offering a perspective from Sri Lanka, which is one of the underrepresented countries in the field of AI and media studies. This research contributes to the academic discourse by offering a perspective from the Global South. In the Global South, the adoption of technology is influenced by different economic and social conditions. Even though there are some limitations to this research, such as the risk of overfitting and the limitation of using linear regression for categorical outcomes, it sets the groundwork for future research to further develop the methodology.

Table 3: ANOVA Analysis of AI Impact on Newsroom Efficiency

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	99.025	14	7.073	4.091	.000 ^b
Residual	84.725	49	1.729		
Total	183.750	63			

a. Dependent Variable: What is your role in the Sri Lankan media sector?

b. Predictors: (Constant), Project rates/fees, AI is reshaping the way media content is created., AI threatens traditional design jobs., Human creativity is irreplaceable in design, AI improves design speed and efficiency., AI-generated content lacks originality, Monthly income/salary, AI helps improve productivity in media-related tasks., AI integration leads to job losses in the sector, AI is transforming the creative design industry., AI reduces the need for human creativity., Client demand, AI poses a threat to creative jobs in the media., Freelance income

Source: Survey Data: 2025

From the ANOVA table above, it is clear that the regression model is statistically significant since the p-value is less than 0.05. This means that all the independent variables have an effect on the dependent variable, which is the role of the respondents in the Sri Lanka media industry. From the above ANOVA table, one can see that the regression model has an F-statistic of 4.091 with

14 and 49 degrees of freedom. This means that all the independent variables in the regression model have an effect on the dependent variable.

From the above ANOVA table, one can see that the regression sum of squares is 99.025, which is a significant portion of the total sum of squares (183.750). On the other hand, the regression sum of squares is 84.725. This means that all the independent variables in the regression model have an effect on the dependent variable. This is further supported by the fact that the regression model has an R^2 value of 0.539.

From an academic point of view, this study is important because it emphasizes the multidimensionality of role differentiation in the media industry, where technological perceptions of artificial intelligence, such as its effects on creativity, productivity, and security of employment, interact with economic variables such as income and client demand. The statistical significance of the model emphasizes the importance of including technological and socio-economic variables in understanding the dynamics in the media industry.

Table 4: Coefficients Analysis of AI Impact on Newsroom Efficiency

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1 (Constant)	7.930	1.118		7.092	.000
AI is reshaping the way media content is created.	.246	.311	.105	.791	.433
AI poses a threat to creative jobs in the media.	-1.632	.442	-.925	-3.695	.001
AI helps improve productivity in media-related tasks.	-.959	.234	-.566	-4.097	.000
AI integration leads to job losses in the sector	.607	.303	.390	2.003	.051
AI reduces the need for human creativity.	.232	.258	.165	.901	.372
AI is transforming the creative design industry.	.636	.441	.238	1.441	.156

AI threatens traditional design jobs.	.179	.270	.113	.661	.512
AI improves design speed and efficiency.	-.075	.401	-.027	-.188	.852
AI-generated content lacks originality	-1.051	.239	-.620	-4.398	.000
Human creativity is irreplaceable in design	-.519	.218	-.296	-2.376	.021
Monthly income/salary	-.103	.309	-.058	-.334	.740
Freelance income	-.478	.427	-.298	-1.121	.268
Client demand	-.414	.297	-.273	-1.393	.170
Project rates/fees	1.376	.425	.823	3.238	.002

a. Dependent Variable: What is your role in the Sri Lankan media sector?

Source: Survey Data: 2025

The analysis revealed several significant predictors, such as perceived job threats, productivity, originality, which were all found to have negative relationships with the media. Project rates/fees were found to have a significant positive relationship. The implications of the analysis are that critical perceptions of AI and the economy are core to the construction of the professional structures within the Sri Lankan media sector, while attitudes towards the transformation are not as significant.

4.3. Descriptive Statistical Analysis

Use of AI Tools in Media Work

Table 5: Use of AI Tools in Media Work

	Frequency	Valid Percent	Valid Percent	Cumulative Percent
Valid Yes, regularly	30	30.0	30.0	30.0
Yes, occasionally	40	40.0	40.0	70.0
Tried once or twice	20	20.0	20.0	90.0
Never	10	10.0	10.0	100.0
Total	100	100.0	100.0	

Source: Survey Data: 2025

The results show that the application of artificial intelligence (AI) tools in creative activities is common among media professionals. A majority of the respondents (70%) claimed to either regularly or occasionally use AI tools, showing the significance of AI as an integral part of modern media activities. The majority of the respondents (40%) claimed to use AI tools on an occasional basis, showing that AI tools are being used as an auxiliary tool in the activities of the media professionals. The use of AI tools on an occasional basis also shows the stage of development in the application of AI tools, where the professionals are trying out the tools while sticking to the conventional approaches.

On the other hand, 30% of the respondents claimed to regularly use AI tools, showing the extent to which the tools are being used in the activities of the media professionals. The percentage also shows the level of dependence on AI tools for the generation of content, designing, and editing.

On the other hand, 20% of the respondents indicated that they used AI only once or twice, which might include those who are either unaware of the capabilities of AI or those who are unwilling to adopt the technology due to concerns over the quality of the output or the ethical implications of the technology.

It is also interesting to note that a small percentage of the respondents (10%) indicated that they had never used AI tools, which again confirms the fact that the non-adoption of the technology is very low, and the overall adoption of the technology can be seen as high in the media industry.

It can therefore be concluded that the overall adoption of the technology by the Sri Lankan media industry can be seen as high, and the level of adoption can be categorized as moderate to high, as the majority of the respondents were actively involved in the use of the technology, but the high percentage of those who used the technology only once or twice might indicate that the overall adoption of the technology is still a topic to be explored by the industry professionals.

Artificial Intelligence Tools Commonly Used by Journalist

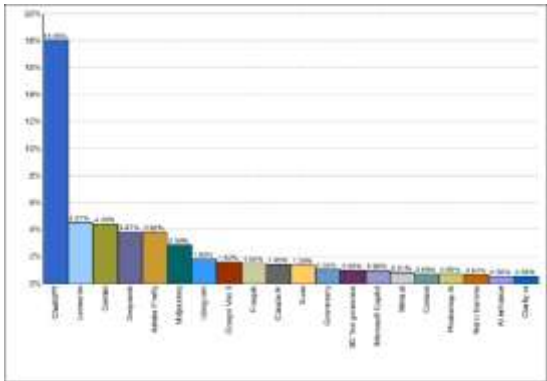


Figure 1: AI Tools Commonly Used by Journalists
Source: Survey Data: 2025

Here, the answers given by the journalists in the sample regarding the artificial intelligence tool commonly used were analyzed using NVivo software, which is used for qualitative data analysis.

The coding analysis using NVivo software also reveals that the use of artificial intelligence tools is concentrated around a few dominant platforms, with ChatGPT being the most dominant AI tool used in the media industry, with 18.09% of the total mentions.

The study reveals that the overall pattern of AI tool usage in the media industry is highly skewed and concentrated around a few dominant platforms. Among all the tools, ChatGPT has emerged as the most dominant AI application used in the media industry, with 18.09% of the total mentions. This percentage is the highest among all the tools and reveals that text-based generative AI has become the primary entry point for AI adoption in the media industry, particularly for tasks like content writing, editing, scripting, and idea generation.

Continuing with ChatGPT, other tools such as Leonardo (4.51%), Gemini (4.39%), DeepSeek (3.87%), and Adobe Firefly (3.82%) show moderate levels of usage. The nature of these tools is associated with visual content creation and design. This further indicates that there is an expansion of AI usage to other areas such as design and multimedia creation.

Other tools such as Midjourney (2.89%) and Ideogram (1.85%) further reinforce the significance of image creation tools, particularly for designers and other content creators. However, the relatively lower levels of usage for these tools compared to ChatGPT further reinforce that although visual tools are important for journalists, they are still secondary to text-based tools.

A number of other tools, including Grammarly, Microsoft Copilot, Canva, and Photoshop AI, show relatively low levels of usage. This further indicates that there is a high degree of fragmentation in AI usage, where many tools are used but only a few show high levels of usage.

From a journalistic perspective, the dominance of ChatGPT is particularly interesting. This suggests that journalists are more likely to use AI tools that are associated with text-based activities such as drafting and editing. This is further reinforced by previous research that suggests journalists use AI tools cautiously.

4.5. AI Usage Across Media Roles

Table 6: AI Usage Across Media Roles

Job role in the Sri Lankan media sector	Use of Artificial Intelligence Tools in Creative Work	Total
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		Yes, regularly	Yes, occasionally	Tried once or twice	Never	
Journalist	Count	2 _a	6 _a	4 _{a, b}	6 _b	18
	% of Total	2.0%	6.0%	4.0%	6.0%	18.0%
Sub Editor or Editor	Count	2 _a	4 _a	2 _a	0 _a	8
	% of Total	2.0%	4.0%	2.0%	0.0%	8.0%
Content Creator	Count	2 _a	4 _a	0 _a	2 _a	8
	% of Total	2.0%	4.0%	0.0%	2.0%	8.0%
Graphic or Video or Motion Designer	Count	12 _a	16 _a	10 _a	2 _a	40
	% of Total	12.0%	16.0%	10.0%	2.0%	40.0%
Technical Staff	Count	6 _a	2 _a	0 _a	0 _a	8
	% of Total	6.0%	2.0%	0.0%	0.0%	8.0%
Other	Count	6 _a	8 _a	4 _a	0 _a	18
	% of Total	6.0%	8.0%	4.0%	0.0%	18.0%
Total	Count	30	40	20	10	100
	% of Total	30.0%	40.0%	20.0%	10.0%	100.0 %

Source: Survey Data: 2025

The crosstabulation analysis shows some significant differences in the adoption of AI tools by different roles in the Sri Lankan media industry. The results show that the highest number of graphic, video, and motion designers are using AI tools. In this category, 12 people are using AI tools regularly, and another 16 are using them occasionally. This category also has the highest number of participants (40%) in the study. Therefore, it can be concluded that the use of AI tools is the highest in this category, probably due to the availability of AI tools like image generators that can be used by these designers. Similarly, the highest number of technical staff are using AI tools regularly. In this category, 6 out of 8 participants are using AI tools regularly. This shows that people with technical knowledge are using AI tools.

On the other hand, the usage of AI by journalists seems to be more heterogeneous. Even though some have used AI occasionally or for trial purposes, a significant number of them (6 out of 18) have never used AI. This reflects that AI usage is slightly lower in the case of journalistic activities. This might be due to some underlying concerns that relate to ethics, credibility, and authenticity of the content created. The usage of AI by sub-editors and editors/content creators is moderate. In this case, AI usage is largely restricted to occasional usage. This reflects that AI is being used as a supporting tool in this field. Most significantly, the results reveal that only 10% of the population has never used AI. This reflects that AI usage is highly prevalent in the media industry. However, the usage of AI differs significantly based on the nature of the role.

The statistical note (subscript letters) reflects that there are no significant differences between the categories at the 0.05 level. This reflects that even though differences exist in the usage of AI by different roles in the media industry, they are not significant enough to prove that differences exist.

4.6. Role in Media Sector and AI Knowledge Level

Table 7: Role in Media Sector and AI Knowledge Level

Job role in the Sri Lankan media sector		Level of Knowledge of Artificial Intelligence and Its Applications in Media			Total
		Very aware	Somewhat aware	Not at all aware	
Journalist	Count	8 _a	10 _a	0 _a	18
	% of Total	8.2%	10.2%	0.0%	18.4%
Sub Editor or Editor	Count	4 _{a, b}	2 _b	2 _a	8
	% of Total	4.1%	2.0%	2.0%	8.2%
Content Creator	Count	0 _a	8 _a	0 _a	8
	% of Total	0.0%	8.2%	0.0%	8.2%
Graphic or Video or Motion Designer	Count	14 _a	22 _a	2 _a	38
	% of Total	14.3%	22.4%	2.0%	38.8%
Technical Staff (e.g., IT support)	Count	2 _a	6 _a	0 _a	8
	% of Total	2.0%	6.1%	0.0%	8.2%
Other	Count	4 _a	12 _a	2 _a	18
	% of Total	4.1%	12.2%	2.0%	18.4%
Total	Count	32	60	6	98
	% of Total	32.7%	61.2%	6.1%	100.0%

Source: Survey Data: 2025

The cross-tabulation analysis shows that the overall level of knowledge about AI among media professionals tends to be moderate, with the majority of the respondents (61.2%) stating that they are “somewhat aware” of AI, whereas only 32.7% are “very aware.” Furthermore, only a small percentage (6.1%) of the respondents have no knowledge about the applications of AI.

In terms of profession, the level of knowledge about AI tends to be higher among graphic designers, video designers, and motion designers. In this group, there are 14 respondents who are “very aware” of AI, and another 22 are “somewhat aware.” This may be due to the fact that this group constitutes the largest number of the overall respondents. In other words, the level of knowledge about AI tends to be more developed in this group, especially since this field tends to be more visually oriented and technology-driven.

Journalists tend to have moderate levels of knowledge about AI, with 10 respondents stating that they are “somewhat aware” and

another 8 stating that they are “very aware.” However, none of the journalists have no knowledge about AI, indicating that this concept has already been incorporated into their work.

In contrast, the content creators show a uniform level of moderate awareness, as all respondents (8) rated themselves as “somewhat aware.” This shows that none of the content creators have high levels of understanding, despite probably using some AI tools. The sub-editor/editor group shows a wide range of responses, with all levels represented. Interestingly, this group shows the first instance where some people have no knowledge of AI. This shows that there are inconsistencies in terms of technological understanding within this group.

The technical staff show high levels of understanding, with the majority rated as “somewhat aware.” This group shows no people with no knowledge of AI. This shows high levels of understanding, as this group should be exposed to some digital technologies. The overall results show that there are no uniform levels of understanding about AI. However, the levels are higher for the design and technical staff than for the other groups. This shows moderate levels of understanding for the editorial and content groups.

4.7. Influence of English Proficiency on AI Tool Usage

Table 8: Influence of English Proficiency on AI Tool Usage

English Ability		AI Tool Usage in Creative Work				Total
		Yes, regularly	Yes, occasionally	Tried once or twice	Never	
Excellent	Count	6 _a	6 _a	0 _a	0 _a	12
	% of Total	6.0%	6.0%	0.0%	0.0%	12.0%
Good	Count	20 _{a, b}	30 _b	6 _a	8 _{a, b}	64
	% of Total	20.0%	30.0%	6.0%	8.0%	64.0%
Fair	Count	4 _a	4 _a	14 _b	2 _{a, b}	24
	% of Total	4.0%	4.0%	14.0%	2.0%	24.0%
Total	Count	30	40	20	10	100
	% of Total	30.0%	40.0%	20.0%	10.0%	100.0%

Source: Survey Data: 2025

The cross-tabulation analysis reveals the following relationship between English language proficiency and the use of AI tools in the field of creativity. The level of engagement with AI tools is the highest among the respondents with excellent English proficiency, as all the individuals (12 out of 12) in this group have either used AI tools regularly or occasionally.

It is also observed that the majority of the respondents, i.e., 64%, have good English proficiency, and the level of engagement with AI tools is also quite high in this group. A major portion of the individuals in this group have either used AI tools regularly (20%) or occasionally (30%), although there are also a few individuals with limited or no use of AI tools.

In contrast, the responses of individuals with fair English proficiency show a very different trend. The majority of the individuals with fair English proficiency, i.e., 14%, used AI only “once or twice.” Furthermore, the number of individuals with fair English proficiency also tends to be lower. This may imply that low English proficiency may hinder the effective use of AI. The reason for such an implication may lie in the fact that most AI tools are based on the English language. In summary, the responses show a positive relationship between English proficiency and AI usage. The higher the English proficiency, the higher the chances of an individual using AI, and the lower the English proficiency, the lower the chances of an individual using AI.

4.8. Media Role and Perceived Job Risk Due to AI

Job role in the Sri Lankan media sector		Job Risk Across Media Roles				Total
		Somewh				
		Yes	at	No	Unsure	
Journalist	Count	0 _a	6 _a	10 _a	2 _a	18
	% of	0.0%	6.5%	10.9%	2.2%	19.6%
	Total					
Sub Editor or Editor	Count	2 _a	2 _a	2 _a	2 _a	8
	% of	2.2%	2.2%	2.2%	2.2%	8.7%
	Total					
Content Creator	Count	0 _a	6 _a	2 _a	0 _a	8
	% of	0.0%	6.5%	2.2%	0.0%	8.7%
	Total					
Graphic or Video or Motion Designer	Count	8 _a	14 _a	10 _a	2 _a	34
	% of	8.7%	15.2%	10.9%	2.2%	37.0%
	Total					
Technical Staff (e.g., IT support)	Count	2 _a	4 _a	2 _a	0 _a	8
	% of	2.2%	4.3%	2.2%	0.0%	8.7%
	Total					
Other	Count	2 _a	4 _a	6 _a	4 _a	16
	% of	2.2%	4.3%	6.5%	4.3%	17.4%
	Total					
Total	Count	14	36	32	10	92
	% of	15.2%	39.1%	34.8%	10.9%	100.0%
	Total					

Source: Survey Data: 2025

The cross-tabulation analysis offers valuable insights into how various media professionals view the risks of being replaced by AI.

Overall, the results show that the perceived risks for various jobs are moderate and not extreme. The majority of respondents, 39.1%, believe that their jobs are "somewhat" at risk. In comparison, 34.8% believe that their jobs are not at risk, and

only 15.2% believe that they are at risk. Overall, this suggests that artificial intelligence is more of a potential or growing threat than a pressing concern at this time.

In terms of various professions, it is evident that graphic, video, and motion designers show the greatest perceived risks. Overall, 8 respondents in this category believe that their jobs are at risk, and 14 believe that they are "somewhat" at risk. Moreover, this is also a large proportion of the sample, and this suggests that jobs in this area are more at risk due to AI and automation, especially because of the emergence of generative design tools. Similarly, for content creators, there is a relatively high perceived risk level, with most (6 out of 8) choosing “somewhat.”

For journalists, there is a relatively low level of perceived risk, with most (10 out of 18) choosing that their jobs are not at risk from AI technologies. None of the journalists chose “yes,” which could imply that there is still a role for human judgment and ethical considerations in journalism. For the sub-editor/editor category, there is an even distribution of all possible answers, suggesting that there are uncertainty and variability in this category. For technical staff, there is moderate perceived risk level, with half of this category choosing “somewhat,” suggesting that there is awareness of the potential impact of AI but that there is still confidence in this category.

5. Conclusions

The study sought to evaluate the influence of AI on professional roles in the Sri Lankan media sector. Consequently, this study is primarily based on perceptions about AI, economic considerations, and the use of AI tools. The results demonstrate proof that AI is not only a technological upgrade but a revolutionary tool that is redefining the nature and existence of professional roles in the media sector.

Regression analysis results indicate that the model is statistically significant ($R^2 = 0.539, p < .001$), thus proving that cognitive and economic variables related to AI influence a substantial portion of professional roles in the media sector. Specifically, variables related to perceived threats to creative professional roles due to AI, concerns about the source of AI-created content, and beliefs about improving productivity through AI were established as key predictors. Consequently, this study proves that the influence of AI is not only related to its technological attributes but also to how it is perceived and experienced in the media sector.

One important finding to come out of this study is the duality of technological optimism and professional anxieties. While the majority of respondents agreed that AI will enhance efficiency, increase productivity, and revolutionize creative processes, they also showed substantial concerns about being replaced, reduced demand for human creativity, and a lack of originality. This duality is a reflection of a broader concern within the creative

industries, where AI is perceived to be both enabling and disrupting.

The descriptive results also support this duality and show that the sample is largely young, educated, and moderately to highly skilled, and that a large number of them already make substantial use of AI in their work. However, despite this high penetration and adoption, there is a sense of uncertainty and confusion. While a large number of them showed partial awareness of the implications of AI, a substantial number were uncertain about their job security and long-term career prospects. This suggests that while a large number may be using AI, they may not necessarily be aware of it or accept it.

From the analysis of the AI tools used, it is evident that there is a concentration of AI tools in the industry, with ChatGPT being the leading AI tool, followed by Leonardo, Gemini, Midjourney, and Adobe Firefly. This indicates that the integration of AI in the Sri Lankan media sector is largely driven by the easy and convenient use of AI tools, especially generative AI tools. This also indicates that the media sector in Sri Lanka is witnessing the use of AI tools in the hands of professionals, as there is diversity in the AI tools used.

Most importantly, the study has demonstrated that the economy plays a vital role in the profession, as the predictor 'project rates/fees' has turned out to be a positive predictor. This indicates that despite the technological changes in the industry, the economy plays a vital role in the profession in the media sector.

From a wider perspective, this study has shown that instead of replacing human labor, AI is changing the nature of human creativity. The traditional distinctions and separations between different roles are becoming less clear, and new types of roles are emerging that require a combination of technical and creative skills. From this perspective, human creativity is not being replaced but redefined and enhanced to higher levels of conceptual and semantic activities.

To conclude, this study has shown that there is a need for a nuanced understanding of the role and impact of AI on the Sri Lankan media sector. The study has shown that the role and impact of AI on the Sri Lankan media sector are complex and closely related to human perceptions and economic realities. Rather than being a threat and an opportunity for human creativity and intelligence, AI is a transformative force that is changing the very foundations of media work. The ability of human professionals and organizations to cope with this transformation is closely related to their ability to adapt and innovate and to critically engage with the changing relationship between technology and creativity.

6. Recommendations and Future Research

Based on the findings of this research, this study proposes several recommendations for media professionals, organizations, and policymakers.

Promote training to develop AI literacy

Media organizations should invest in training and skills development programs to build the capacity of media professionals to utilize AI technologies. Education institutions and universities that train media professionals should also include this component in their curricula. Since the respondents are only moderately aware of AI, digital skills are crucial for adapting to this new technology.

Encourage human-AI collaboration

Rather than viewing AI as a replacement for human capabilities, media organizations should encourage collaboration between humans and AI to enhance human creativity. This can help alleviate the fear of journalists about AI and increase productivity.

Strengthening creative skills development

A lot of emphasis should be laid on the development of human values of creativity that are distinctively human.

Ensuring transparency within the organization

Since there are uncertainty and ambiguity about the role of employees and the use of AI in the organization, there is a need to ensure transparency.

Developing ethical guidelines

Since there is an increase in the use of AI tools in the industry, there is a need to ensure ethical guidelines for authorship and authenticity of content in the media industry. Hence, there is a need to pay more attention to this issue in policymaking for this industry.

Supporting Fair Economic Structures

Given the importance of project rates/fees as a significant predictor, policymakers and industry stakeholders should ensure fair compensation models in an AI-influenced labor market.

7. Future Research

Algorithmic journalism based on AI is a new form of technology that is invading many fields. In terms of future research in this area, it can be identified that there can be many different dimensions for researchers to work in. In terms of the media industry, research can be done to see the impact of AI in the future and its implications for the employment sector in the media industry. In addition to that, comparing the impact of AI in Sri Lanka to other countries, especially in the Global South,

can also be done to have a more in-depth understanding of the impact of the context. In that way, more in-depth interviews can be done to understand more about the individual experiences and perceptions.

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