

# HARNESSING THE IMPACT OF ARTIFICIAL INTELLIGENCE IN THE PRESERVATION AND TRANSFORMATION OF FOLKLORE KNOWLEDGE AMONG THE COSMOPOLITAN CITY GUWAHATI (ASSAM), INDIA

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ABSTRACT

*This research delves into the intersection of artificial intelligence (AI) and cultural heritage, specifically focusing on the preservation and dissemination of folklore knowledge among the youth in cosmopolitan cities of India. Against a backdrop of diminishing awareness of traditional folklore, this study aims to explore how AI technologies can be strategically employed to revitalize and sustain cultural narratives. The paper begins by contextualizing the rich cultural heritage of India and highlighting the contemporary challenge of waning interest in folklore among the youth in cosmopolitan settings. The research problem centers on the urgent need to harness technological advancements, particularly AI, to bridge the gap between traditional cultural practices and the younger generation. Through a comprehensive literature review, the paper examines existing methodologies for folklore preservation, the role of AI in cultural heritage conservation, and the use of technology in disseminating knowledge. The theoretical framework establishes the groundwork for understanding how AI can be integrated into folklore preservation strategies, considering both cognitive and cultural dimensions. Methodologically, the study adopts a multifaceted approach, incorporating qualitative interviews, analysis of AI algorithms, and a consideration of ethical implications in handling cultural data. The data analysis section assesses the impact of AI on folklore preservation and its effectiveness in engaging the youth with cultural narratives.*

*The results and discussion section presents key findings, discussing implications for cultural awareness and addressing any limitations encountered during the research. The conclusion summarizes the research outcomes, provides actionable recommendations for implementing AI in folklore preservation efforts, and suggests avenues for future research.*

*This research contributes to the evolving discourse on the symbiotic relationship between technology and cultural heritage, offering insights into how artificial intelligence can play a pivotal role in safeguarding and transmitting folklore knowledge within the dynamic context of cosmopolitan cities in India.*



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## 1. INTRODUCTION

Assam is a State in Northeast India, which has been considered an example of cultural richness and heritage of folklore deeply rooted among the population in different diverse communities of the Assamese population, which are all related to the ancient traditions. The most well-known concept of traditional heritage in the region of Assam is considered as Bihu and the rich history behind the location of the region (Peacock & Pratt 2011, Dutta & Goswami 2021) however, it is noted that in the present period, the youth of the region have shown their diverging viewpoints or the divergent behaviour in the culture of the region. The lack of knowledge and the forgetfulness among the youth in the culture have been negatively impacting balancing the long-term history. It is noted that the main problem which has been faced by the Youth population in the Cosmopolitan city of Assam is the lack of awareness regarding the knowledge of the culture among the population, which has been reducing their rate of engagement in the region. It has also been noted that the urban area is considered as a fast-paced lifestyle, which has often led to the generation of the lack of awareness and the creation of interest in folklore among the youth population (Chowdhury & Chowdhury, 2018). The assessment has been designed to further delve into the role of AI in the preservation of cultural knowledge and folklore culture among the youth. Moreover, more prominence will be given to the importance of AI, and the different opinions on the optimisation of AI have also been highlighted in the section.

## 2. LITERATURE REVIEW

### 2.1 Folklore Preservation: Previous Methods and Challenges

The study of the academic paper of Di Lecce & Amato, (2020) has noted the information, which suggested that in the region of Northeast India, the rich cultural heritage the diverse folklore has been noted, and the preservation of the culture has also been noted to evolve in an efficient manner over the period of time. The older version of preservation has been considered as storytelling, which comes under the Oral Traditions, where the elders have been playing a crucial role in passing down the folklore through the adoption of storytelling, myths, legends and epics in the family gathering, which is presented from Anantrasirichai and Bull (2022). This has drastically changed to community-based Learning, where the Learning from the Satras, Namghars and other religious institutions have played an influential role in preserving the teaching and the folklore with the help of rituals, chanting and cultural practices among the youth. The analysis of the paper from Pierdicca et al, (2020) noted, however, at the present period, the adoption of different digital platforms has also been noted to provide important knowledge on the uniqueness of the culture being

presented in the Online Databases, websites and the different mobile apps, which have helped in increasing the accessibility of the knowledge and the resources in respect to the different cultures. In addition, it is noted that the adoption of social media has also contributed to the process of sharing folklore knowledge among the population, which is mentioned in the study Kidd & Castano, (2013).

However, there are different challenges that have also been presented in the context of the diverse preservation methods. It is noted that from the study of Aung (2019). The main challenge in the traditional methods is mainly used in the rural commodities, the lack of accessibility of the folklore in the urban region was very less. Hence, the young population in the urban population have been facing the difficulty of getting sufficient information on the Folklore awareness of the Northeast Region. In the case of using social media, the study of Guo, et al. (2020) has noted that the threat of rising of false information related to the culture has been posing a major difficulty in accessing factual information.

### 2.2 AI in Cultural Preservation

The analysis of the literature section of Das et al, (2021) has provided the information that the Northeast Region of India is considered a treasure trove of diverse culture and rich folklore traditions. However, the increasing modernisation and Urbanisation have been noted to pose a threat to the cultural assets of the region, and the rate of awareness has been noted to reduce in a drastic manner. It has also been noted the information that the help of adoption of AI has helped in the procedure of increasing the preservation of cultural awareness in the region Pisoni et al. (2021). The investigation from the paper of Kaplan & Oudeyer, (2007) has also noted that AI has helped in the procedure of addressing the challenge of accessibility among the population. AI tools have been helping in the translating and digitalising of folklore content (Foka et al, 2023). Hence, it is making it available on different online platforms for the young population in Cosmopolitan cities.

### 2.3 Knowledge Dissemination through Technology

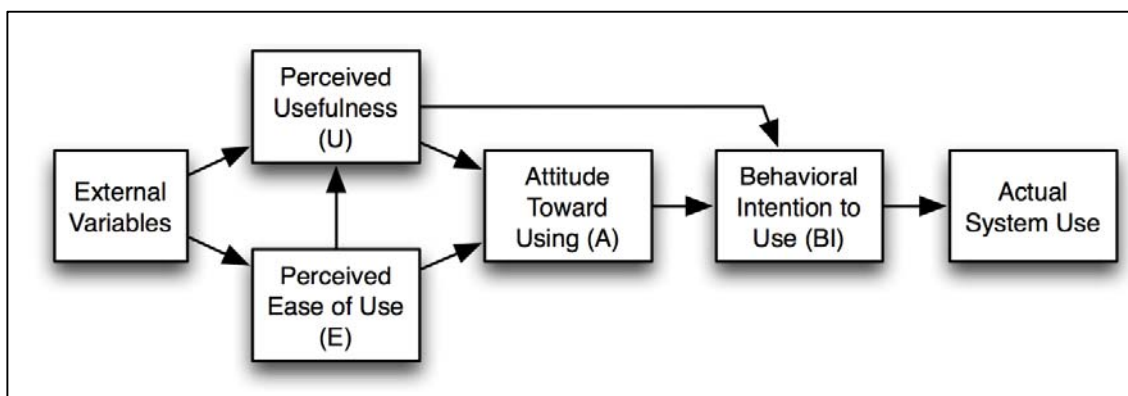
The study of the paper from Kaswan, et al, (2021) has also noted the information which suggested that the major example of AI technologies in the preservation of the culture is the optimisation of Natural Language Processing (NLP), which has been used for the translating and the analysis of the text of folklore, moreover, also enabling machines translation, providing of the sentiment analysis and the identification of the key themes and motifs have also been noted. This process has helped in the procedure of maintaining the interests of the population in an efficient manner. In addition, the analysis of the paper from Volk & Deng, (2018) has further analysed that the introduction to Computer Vision is also noted to be the evolution of AI for the preservation of culture in an efficient manner. Computer Vision has been used for the analysis of the images and the analysis

of the traditional performances and ceremonies, which have enabled the automatic annotation and the retrieval of the cultural content. In addition, this has helped the young population in getting the pictorial representation of the different cultures.

### 3. THEORETICAL FRAMEWORK

#### 3.1 TAM in Folklore Preservation

The Technological Acceptance Model (TAM) (Figure 1) have the main objective of shedding light on the importance of technologies in the culture or in the industry.



**Figure 1.** TAM model  
(Source: Davis, (1989))

The analysis of the academic paper of Davis (1989) has noted that with the help of the adoption of technologies has helped in meeting the objectives. Hence, the need and the requirement for the adoption of different sets of technologies have been increasing in a drastic manner. The model has been divided into different components, which have helped in the procedure of influencing the participation or the knowledge regarding the adoption of advanced technologies or the software in the procedure. It is noted that the accessibility of online databases has helped make it convenient to access folklore stories, music, and other resources. Moreover, in the recent period, the younger population have shown high reliance on technologies and has noted to use the of AI in the folklore culture in a more engaging manner, such as with the help of interactive applications and the provision of virtual reality, which have helped in enhancing the learning experience, which has been stated b the academic analysis of Pencheva et al. (2020).

#### 3.2 Cultural Impact of AI

It has also been noted that the incorporation of AI, which has been noted from the study of Goswami, (2016) has highly helped in the procedure of increasing engagement among the young population. In addition, the provision of smooth interfaces has helped in making the accessibility of cultural heritage in a simple and easy to navigate manner. In addition, this has helped in making it easy for the population who are not familiar with the advanced technologies an efficient. The engagement in the different cultural activities with the proper knowledge has been noted with the integration of AI in cultural preservation.

### 4. METHODOLOGY

#### 4.1 Research Design

For the procedure of collecting the data, the selection of a single source is highly important, and for that assessment, the academic has chosen the option of utilisation of the “qualitative data”, through which the detailed analysis of the paper will be done in an efficient manner. For the “qualitative data”, the optimisation of the primary method, which is the Interview, has been conducted (McGowan et al, 2020). The first-hand opinion has been gathered with the designing of 5 open-ended questions, which are all related to the research title and highlight the impact of AI on cultural preservation.

#### 4.2 Data Collection Methods

For the conducting of Interview, the academic has adopted the option of “purposive sampling”, where the main target population are 3 younger population from the age group of 21-40 and 2 older population who are less techno-savvy and are aged between 40-65 from the geographical region of Assam.

#### 4.3 Ethical Consideration

While conducting the Interview and interpretation of the data, the academics have maintained the privacy of the participant. The elimination of the mentioning of name or their constant information has been done from the whole assessment, which has helped in maintaining confidentiality (Pandey & Pandey 2021). All the questions which are prepared are directly related to the research title. In addition, no personal questions were asked in the Interview.

## 5. DATA ANALYSIS

### 5.1 AI Impact Assessment

With the help of the incorporation of AI in the procedure of preservation of the Assamese culture has been done in an efficient manner. One of the main reasons for the optimisation of AI has been considered as more validated from the traditional method as it has been helping in increasing the accessibility to the different documents and archives. In addition, the proper translation of the traditional language to the modern language has also been done in an efficient manner, which has helped in the procedure of the younger population to completely understand the cultural uniqueness in an efficiently manner.

*“The traditional methods for the preservation of the folklore have been heavily relying on the oral stories, and the presence of foreign language in the manuscripts has reduced the willingness among the younger population to gain the knowledge. However, AI has helped us in providing proper deciphering or translating a diverse range of scripts. Hence, the accessibility of the information has also started to increase.”- Techno savvy Younger population 1.*

The adoption of AI has helped in the accessibility of the different sources of culture to everyone regardless of age or location. The main example of it was considered as the optimisation of the online platform platforms, which have been powered by the application of AI, which have helped in accessing the stories, songs and other folklore material which can be considered difficult to find for the other preservation period. However, the incorporation of AI has also raised the challenge of maintaining the authentication of the datasets in the procedure of translating the scripts, which will be missing in the oral traditions such as through poetry and songs, which have added the cultural essence to the spreading of awareness on the culture.

*“I am not highly familiar with AI and the recent technological development for the preservation of the culture. However, I believe that the integration of AI has been helping us in increasing engagement among the young population with the help of a high range of accessibility. However, despite all the benefits, my inclination towards the oral tradition such as song play or has have been maintained, as I have grown up with such process and I believed it had helped me in forming the closeness with my culture better” – Less Techno Savvy Older population 3*

The adoption of AI has been noted to introduce different difficulties, and one of them is considered the risk of Bias, and the distortion has been posing a great threat to the authenticity of the paper. It has also been noted that, the AI algorithm can perpetuate the existing societal biases in the data which are trained for the embedded one. In addition, the change of the overall meaning of the transcripts can also be changed, hence, the risk of falsification of folklore will also be increased.

*“I believe that the incorporation of AI will increase the vulnerability in maintaining the authentication of the*

*data. Hence, I believe that the reliance on AI should be reduced for the cultural preservation”.* - **Less Techno Savvy Older population 1**

### 5.2 Youth Engagement

The opinion of the youth is crucial in this investigation since it will help in understanding the role played by AI technology in order to engage the youth population of Assam toward folklore. The first question for the youth in this Interview was linked with the role played by AI in preserving folklore, and the response indicated that AI could rescue the stories from the brink of being forgotten. In the Assamese culture, folklore is essential. AI preserve the past and eliminates any language barrier since anyone can assess these with their preferred language, appealing to a wider audience.

*“...I think using AI can preserve the folklore so that the next generation can also learn about these”- Younger interviewee 1.*

*“...AI can translate the folklore in different languages so that even non-Assamese speaking audiences can also learn about these.” Younger interviewee 3.*

The next question was linked with the specification, which can help in the prevention of folklore with the inclusion of AI technology. In Assam, AI can learn endangered dialects used in the tales and reconstruct the lost pronunciation, reviving the tradition from the brink of extinction. The data have also indicated that the AI-powered chatbots, as well as the virtual storytellers, can create a dynamic and personalised storytelling experience, engaging the younger generation.

*“...I think that the translation feature of AI can engage the younger generation and preserve the Assamese folklore.” Younger interviewee 2.*

*“...I believe that the AI-powered chatbots can personalise the storytelling experience, which is preferred by the younger generation.” Younger interviewee 1.*

The final question for the younger and tech-savvy participants was associated with the means by which the AI preservation method of folklore can be considered superior to the traditional method. The response has led to the understanding that the traditional method has limited research geographically. As a result, the folklore was restricted to Assamese people, but the inclusion of AI can make it national or global. In addition to this, the traditional method, which mainly includes physical manuscripts, can be easily damaged or lost over time, but the AI-based method can analyse and fully restore the damaged or even incomplete recordings. As a result, the older generation, who are less tech savvy, have also recognised the benefit of the inclusion of this technological method over the traditional methods.

*“... in the traditional written method, all the folklore are written in the Assamese language, only very selected population can learn these, but due to the inclusion of AI-based method anyone can read these in their preferred language.” Younger interviewee 2*

“...I understand that with the help of AI, any damaged manuscript can be resorted and ensure that our next can learn about these folklore.” **Older interviewee 2**

Based on the interview information, it can be observed that the AI-based method of preserving the folklore is far superior to the traditional method. Not only the younger but also the older generation agree with this. Additionally, with the inclusion of AI, the next generation can also become excited to learn about these folklore, it confirms that these stories will be depleted by the passage of time.

## 6. RESULTS AND DISCUSSION

The analysis from the section Literature has highlighted the information which has suggested that there are different range of preservation methods which has been presented for a long time in history in the Northeastern region. It has further been noted that the old tradition, which mainly consists of the Oral Tradition, where the transferring of knowledge has been done with the help of storytelling of engaging in the musicals and poetry and the elders have been playing a major role in that process. The same nature of the information has been found while interviewing the old and less techno-savvy population. The interviewees have noted that they believed with the adoption of AI, the authentication or the misinterpretation of the details can occur while translating the different scripts in the industry. Moreover, it has also been noted that they strongly believe that awareness through the help of Poetry and music will bring the younger population closer to the culture rather than relying on advanced technologies or AI integration. The analysis of the section literature has noted the information that, with the help of the integration of AI in cultural preservation, the engagement of the young population has been noted. Their willingness and participation have also been developed when the adoption of Virtual assistants has been developed for answering all the queries of the population. The delivery of messages or information in different languages has also led to enhancing cultural awareness. A similar set of responses has also been noted in the case of Interview. It

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is noted the younger and highly techno-savvy population has noted that the introduction of AI Chatbots has helped in providing a personalised experience and also enhanced the storytelling method which also has under the personalised experience; hence, the experience among the younger population has increased, and their willingness to participate has also been noted to enhance.

## 7. CONCLUSION

AI-powered translation tools have helped in reducing the communication gaps in cultural transcripts. Moreover, the introduction of the Chatbots and the Virtual Assistants have also developed for answering the different questions related to folklore asked by the population. Moreover, the answers were delivered in different languages. Hence, the awareness of knowledge and the preservation of the cultural heritage have been maintained. The response has indicated that the automated transcription and annotation can develop a searchable archive of folklore, overcoming the limitations of the oral traditions.

## 8. RECOMMENDATION

The main recommendation has been considered as the developing of a Fuser-Centric Design. The development of the AI must be done in such a manner that it will provide a user-friendly interface and also cater to the specific needs, and the preferences of the customers must also be considered during the preparation of the AI platforms. In addition, the proper maintenance of the proposition of cultural sensitivity must also be done in the procedure of conducting research through the help of AI. The more appropriate option for the assessment will be considered as conducting the survey among the University Students residing in Guwahati, who are taking their course in Gauhati University. Through the help of the survey, the opinion of the students regarding the optimisation of AI in their cultural awareness and their willingness the optimisation of AI for gaining cultural knowledge will also be highlighted.

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## **APPENDIX**

### ***Interview questions for the less tech-savvy older population***

1. How do you think AI plays a role in preserving and disseminating folklore?
2. What do you believe are the potential risks of using AI for preserving and disseminating folklore?

### ***Interview questions for tech-savvy younger population***

3. How do you think AI plays a role in preserving and disseminating folklore?
4. What specific applications of AI improve the preservation and dissemination of folklore?
5. Why do you think that the AI preservation method is superior to the traditional method?