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AI in Post Editing of News: A Study with Arabic News Articles

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ABSTRACT

The accelerated evolution of artificial intelligence (AI) tools has greatly influenced the practice of translation, specifically challenging their capacity to localize material in a manner that complies with the cultural and contextual demands of the target audiences. The study examines the localization capacity and precision of two of the most widespread AI models—Google Translate and ChatGPT—in translating Arabic news stories into English. The study collected 15 news stories from major Saudi newspapers to act as the baseline dataset. AI-generated translations are compared with professionally created human translations to determine the level of localization achieved. All translations were evaluated by a panel of professional language experts according to predefined localization measures. Their evaluation is quantitatively analyzed via SPSS to determine statistical differences in localization quality. The research seeks to uncover how far AI-based tools can localize culturally unique content, identify challenges for such models, and provide genre-based differences in performance. The results provide insights into the limitations of AI in localizing news content today and the potential for future expansion. Furthermore, the results revealed stark differences in the quality of localization between AI and human translations, identifying key challenges and noting differences in the effectiveness of localization across various news types. ChatGPT emerged as the most accurate AI model for localizing the news data. This study adds to the body of literature on emphasizing the importance of post-editing and AI-aided translation in the case of Arabic-English language pairs.

Keywords: AI Output; Arabic News Items; Localization; Post-Editing; Research Work

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1. Introduction

Language processing has become a factor of Artificial Intelligence faster than human imagination, even as late as the preceding decade^[1]. In the news industry, this is even more critical given the fact that information dissemination across the globe is highly dependent on translation^[2]. Although Arabic is a UN language spoken by more than 300 million people, there is a historical bias in favor of English.

In fact, the development of AI tools in Arabic, compared to other languages, has not been as remarkable as that of English, which has a truly international user base^[3]. In this scenario, the translation of news items from Arabic to English using AI applications is a matter of serious concern and deserves deep investigation^[4]. In addition, whether and how much localization of content the applications choose to engage in can make or break the impact of the news. Liu and Li rightly point out that misunderstandings attributable to the translation output can affect the credibility of the news and have deeper consequences^[5]. Differences in cultural background, regional geopolitics, social customs, and political repercussions are all factors that should be considered while engaging in translation. Then there are privacy and confidentiality concerns too, with the scales being tipped against AI.

This study looks at how well AI models translate news between Arabic and English, pointing out serious issues with handling content that is sensitive to cultural differences. It highlights the need for human oversight in high-stakes domains like politics and religion. The study, which concluded that ChatGPT was the most effective approach, offers important information to lawmakers, developers, and newsrooms. By supporting culturally sensitive training datasets, it connects innovation with linguistic and ethical accuracy and adds to the larger conversation about AI's place in multilingual media. Focusing on the accuracy and appropriateness of the translated content, particularly in localization, this research is expected to contribute to the existing literature and, in the long run, improve AI.

Newspapers remain the most eminent source of ground data, requiring information to be presented in a proper and unprejudiced manner, and the grammar must be rational and fitting. News is not merely what is occurring, but also what is seen and set forth as necessary, claims Fowler^[6], who believes the media choose events in detail according to a

multifaceted set of newsworthiness criteria. That is, news must be significant, as well as be a definite (reliable) account of an event.

Language limits cannot isolate people anymore. So, it is not surprising that translation skills have turned into a fundamental part of mass communication. Media translation is one of the most visible fields of translation in the contemporary world. Its primary function is to supply trustworthy information in multiple dialects, allowing for communication with people worldwide. The study aims to answer the following questions:

1. How effective are English translations of Arabic news as obtained from three AI applications, viz., DeepL, Chat GPT, and Google Translate?
2. What is the extent of localization done by AI-generated translation in Arabic news items compared to their corresponding human translations?
3. What are the most frequent types of localization issues identified during the post-editing of AI-generated Arabic news content, and how do these issues vary across different categories of news?
4. Which of the AI models localized Arabic news items to a greater extent than the other(s)?

2. Literature Review

Localization is a complex process that has two major components, viz., translation of material and adaptation of material to suit the cultural nuances of the target audience or readership^[7]. The role of AI in these processes is mainly limited to repetitive task performance and reduction of production time. However, given the still-developing state of AI in lesser-used languages such as Arabic, relying solely on AI for the localization of sensitive content such as news can be quite risky^[8]. However, the AI models are improving and getting enriched with every single attempt that a user makes to translate content using them^[9,10]. AI tools based on these models work on a two-way method of ingesting the inputs fed into them to enrich the large language database as well as generating an output.

The translation industry is observing the integration of AI-based translation tools into processes, and post-editing has emerged as a key factor in terms of quality and reliability in translated products, regardless of whether the translated

material is for newspapers, websites or any other type of entity. After AI models, which were able to lessen the initial workload of translating texts, the quality of the translations is often, at best, deemed to be mediocre as some of the linguistic or cultural nuance of the original text is lost in order for the machine translation to achieve the translation quickly. Human translators provide their feedback and insights to consider the tone of the translation, grammaticality, fluency, and adapt culturally sensitive references for the intended audience. Bentivogli et al. acknowledge that “post-editing” can improve machine-translated texts into publishable quality, especially in subject fields where precision and contextual understanding matter a great deal like legal translations, medical translations, or journalism^[11].

In the context of Arabic news, even small mistakes, such as an incorrect translation of a political title, or a misunderstanding of a religious reference, may lead to a serious misunderstanding and/or offense to the public. As a result, post-editing becomes critical to ensure that machine-translated texts meet audience expectations and conform to norms of social and cultural practice^[12]. The relationship between AI systems and human translators is far less likely to be viewed as a quick fix to an ongoing problem, but as a sustainable, required model for quality translation in sensitive material.

Huang et al. note that for machine translation models to better understand the specific language of the news industry and achieve greater accuracy in output, these models need to be trained using news-specific data^[13]. This will naturally need the use of bilingual data for the models to be enriched. Robust feedback mechanisms in place will also make the tools more efficient. Lim highlights that for AI tools to effectively share news and information in different languages, they need to go through cultural training. They must also show flexibility to understand cultural differences and context. Finally, the techniques they use in translation will have to be context-aware^[14]. This need is further highlighted by recent work by Al-Hassani and Chatterjee, which shows how linguistic and cultural localization frameworks can enhance the results of Arabic-English AI translation, especially for high-context content^[15].

Detractors may discount the benefits of AI in translation when weighed against the risks. However, De-Lima et al. stress the unique feature of speed that is ensured by AI

tools in translating materials that may then be disseminated quickly across the world. In any case, constantly using and updating these tools will help improve the existing capabilities and strengthen the theoretical support for the tools to operate upon^[16].

The challenges of translating Arabic news lie in capturing its linguistic complexity, cultural nuances, and contextual depth, which often exceed the capabilities of machine translation alone. There are several linguistic and cultural issues that make it difficult to translate Arabic news content correctly with machines. For one thing, the convoluted morphological structure of Arabic and its coexistence with diglossia (the presence of both Modern Standard Arabic and spoken dialects at the same time) make it difficult to parse and match words regularly.

The accurate machine translation of Arabic news content faces several linguistic and cultural challenges. Arabic has a rich and complex structure, and it includes multiple regional dialects that exist alongside Modern Standard Arabic. This diversity creates significant difficulties for AI models when they try to understand and consistently translate words^[17].

In religious and political language, for example, news stories frequently adopt formal and dignified speech, metaphors, and terminology specific to a given area of practice. Phrases like “حفظه الله” or “رسالة الحرمين الشريفين” are culturally and ideologically loaded, so they need more than just a literal translation to keep their meaning and respect in the target language. The translation is significant in political discourse and world narratives, particularly in political narratives or religious writing, where tone, honorifics, and intertextual allusions are extremely significant^[18–20]. Translation could get these sections wrong and the message may not be intelligible or may lose its cultural and ideological significance^[11].

Previous studies about artificial intelligence (AI) and post-editing with respect to news translation have considered the usefulness, limitations, and increasingly important role of machine translation technologies in handling files for language varieties that are linguistically and culturally distinct, for example Arabic language variety. Therefore, numerous studies have examined why AI translation models are not suitable for high-context languages. These are languages that are dependent on cultural knowledge, implied meaning,

and contextual information to convey messages correctly. Individuals usually claim that Arabic, Chinese, and Japanese are more difficult for AI systems to handle compared to low-context languages such as English or German.

Toral and Sánchez-Cartagena found that general machine translation tools are less effective on high-context languages since they are based on word-per-word translations and cannot understand implicit meaning or reference that is culturally bound^[21]. ChatGPT recently emerged victorious in comparison tests as a more context-sensitive model^[22]. It is more fluent and flexible than DeepL and Google Translate, particularly when it comes to following implied meaning and altering the syntax to suit the rules of the target language^[23–25]. But even the best models struggle to localize material that involves a great deal of cultural knowledge or an intimate knowledge of rhetorical devices.

Translation in journalism mandates passing of the concepts and messages of the source content beyond just the words, and being highly precise to prevent changing the original intent. In other words, proficiency in translation in this field requires retention of the linguistic, stylistic, and expressive characteristics of the original text, while also accurately conveying the source content. As stated by Bielsa and Bassnett, the information conveyed by journalistic organizations to different cultures undergoes not just linguistic translation, but also reworking, editing, structuring, and modification to cater to a new audience^[26].

Given that the language found in media texts embodies a specific and unique discourse, complete with its own lexical conventions and stylistic elements, translators need to thoroughly analyze and comprehend the role of stylistic characteristics in media texts to excel as media translators^[27]. In this regard, translation is a communicative act intended to transfer a message across linguistic and cultural divides, possibly considering various readers or listeners. Thus, the primary responsibility of media text translators is to communicate their content to readers as clearly, factually, and thoroughly as possible, given that media texts are defined by stylistic consistency.

3. Methodology

This study adopted a mixed methods approach. By adopting this methodology, the study ensures a holistic, rig-

orous, and practical examination of AI's localization capabilities, making its findings valuable for translators, AI developers, and media professionals seeking to optimize machine-assisted translation workflows.

This study employed a robust methodology to assess AI translation quality. The accuracy and cultural localization of 15 news stories (politics, finance, sports, and religion) were assessed by contrasting ChatGPT, DeepL, and Google Translate with human translations. While statistical analysis was provided by SPSS, qualitative evaluations were carried out by qualified linguists. The localized items were grouped, and values were calculated with the help of SPSS. Important inequalities in AI performance were found during testing in both Arabic-English and English-Arabic directions. For translators and AI developers working with Arabic news information, this all-encompassing method guarantees insights that are both practically applicable and scientifically sound. The content so generated was compared with that produced by a professional translator. Thereafter, the AI content was analyzed and evaluated for localization elements, and raters compared the outcomes of AI models with those of humans along the same factors.

Regarding collecting data for the study, a corpus of news items was collected from leading Saudi newspapers, namely *Majalla* <https://en.majalla.com/>; *alweeam* <https://www.alweeam.com.sa/>; *almowaten* <https://www.almowaten.net/>; and *alriyadh* <https://www.alriyadh.com/2140172>. The corpus of the 15 articles covered prominent areas of interest such as politics, social issues, finance, sports, and health. Thereafter, SPSS was used for analyzing the data, as the researcher coded the localized content numerically. The descriptive statistical values of mean, standard deviation, and frequencies were utilized. These statistical tests were employed to compare the means of accuracy of localization, such as ANOVA and a one-sample T-test.

4. Results

Analysis summarized in **Table A1 (Appendix A)** examined how three leading AI models (namely, DeepL, Google Translate, and ChatGPT) handled specialized Saudi news content. The analysis reveals critical insights into the strengths and weaknesses of these AI models in managing complex translation challenges.

4.1. Banking and Finance Sector

Financial translations present unique demands where absolute accuracy is non-negotiable. Even minor errors in numbers, terms, or phrasing can significantly impact meaning and credibility. In examining stock market reports (Statement 1), we observe distinct approaches to numerical formatting. DeepL retains Arabic-style parentheses around numbers “415 million shares”, which appears unnatural in English financial writing. In contrast, ChatGPT adopts standard Western formatting ‘415 million shares’ while maintaining perfect accuracy—a crucial advantage for professional financial communications.

The translation of banking terminology proves particularly challenging. When rendering “شريحة الثانية” Statement 9, Google Translate’s “second-tier” introduces unintended hierarchical implications, while ChatGPT correctly uses the banking-standard “Tier 2.” As second tier means something that is not in the highest or most important rank or category, while Tier 2 means a component of a bank’s capital structure, considered supplementary capital and less robust than Tier 1 capital. This precision extends to complex financial instruments, where ChatGPT consistently outperforms in selecting appropriate equivalents like “credit certificates” versus DeepL’s less accurate “trust certificates.” The differences may seem subtle, but in financial contexts, such nuances determine whether a translation meets professional standards or whether it requires significant revision.

4.2. Sports and Entertainment

Regarding the localization of sports content, translation demands more than word-for-word accuracy—it requires observing culturally specific items, in this context, from Arabic into English. In the treatment of proper nouns, in Statement 8, DeepL’s “Al-Nasr” (a less commonly used term) contrasts with the correct “Al-Nassr”; luckily, both Google Translate and ChatGPT translated it correctly. More significantly, ChatGPT demonstrates superior handling of sports content, transforming “خطاب جديد” into the natural-sounding, “new narrative”, rather than the awkward, “new discourse” or, “approach”, offered by DeepL and Google Translate.

The analysis of Al-Hilal’s soft power description in Statement 5 reveals even deeper challenges. Google Translate’s conversion of “واجهة حقيقيّة” to “true showcase” and

DeepL’s “true face”, both miss the mark compared to ChatGPT’s “genuine front,” which better captures the original Arabic’s connotation of representation and leadership, so localizing this into English has the same effect.

4.3. Religious and Diplomatic Texts

Concerning religious and diplomatic texts which are the most complex requiring careful rendering of doctrinal concepts and cultural context, the BRICS summit statement (Statement 3) shows how AI models treat crucial doctrinal concepts. DeepL’s omission of “حفظه الله” - “may God protect him” constitutes a significant cultural error in Arabic formal writing, while both Google Translate and ChatGPT retain this essential element. Further, ChatGPT structures the sentence more naturally for English readers while preserving all respectful references.

The translation of religious initiatives in Statements 13 and 15 further highlights these AI models’ differing capabilities. GT’s overly literal, “Enriching Our Visitors, Honoring Our Staff”, and DeepL’s, “Enriching Our Guests, Enhancing Our Employees”, for “غز لمنسوبين” demonstrate the limitations of word-for-word translation. In contrast, ChatGPT’s more nuanced “Enriching Our Pilgrims, Honoring Our Staff”, better conveys the original’s dual focus on service and respect. When rendering theological concepts like, “رسالة الحرمين الشريفين الوسطية”, ChatGPT’s “balanced message of the Two Holy Mosques” proves more accurate than Google’s convoluted, “noble message of moderation.”

These examples demonstrate that several issues affect all AI models to varying degrees. The handling of proper nouns remains inconsistent—while all AI models generally recognize famous names like “Fenerbahçe,” though only ChatGPT consistently maintains the correct orthography. Number formatting varies significantly, with DeepL clinging to source-language conventions while ChatGPT adapts to target-language norms. All AI models struggle with Arabic’s flexible sentence structure, often producing awkward phrasing due to attempting literal translations of complex syntax.

Cultural adaptation presents another universal challenge. While all AI models can translate words, capturing contextual meaning—especially in religious or formal contexts—remains difficult. Google Translate often produces unnatural, overly literal translations, while DeepL

sometimes compromises nuance for fluency. ChatGPT generally strikes the best balance but still requires human intervention for sensitive content. These limitations underscore that while AI models have made remarkable progress, human oversight remains essential for high-stakes translations.

4.4. Proper Nouns and Geographical Terms

In localization from English into Arabic (**Table A2 (Appendix A)**), the translations demonstrate distinct approaches to handling proper nouns, with personal names showing the most variation. “Ala Tannir” appears as “آلاء تنير” in DeepL and “آلاء تنير” in GT, while ChatGPT rendered it as “علاء الطنير”, which corresponds to human output. This reveals the application of different transliterations of DeepL and GT to localize these proper names. Geographical terms like “Beirut Port” show more consistency, appearing as either “ميناء بيروت” or “مرفأ بيروت”, reflecting minor regional preferences rather than substantive differences, as the standard name is مرفأ بيروت.

4.5. Sensitive Terms

Numerical and temporal information maintains perfect accuracy across all AI models, but when compared to the direction of Arabic into English was not, this represents a high—that AI models localize English into Arabic better. Political and technical terminology shows remarkable consistency, particularly for sensitive geopolitical concepts. Phrases like “containment of Iran,” which was rendered by all AI models as “تعزيز احتواء”, and “proxy networks,” which was rendered as “شبكات الوكيلاء”, but it was not similar to human output, “اذرع.” However, this reflects either the use of standardized terminology databases or established discourse conventions. The main variations occur in more conceptual phrases, where translators must balance literal meaning with

contextual understanding, leading to different interpretations of metaphors like “over-the-horizon security guarantor.”

Stylistic differences reveal two distinct translation philosophies. DeepL and Google Translate employ a formal, bureaucratic style with complex sentence structures and passive voice, closely mirroring the source text’s architecture. In contrast, ChatGPT adopts a more conversational, journalistic approach that simplifies syntax and uses active voice for better readability. These differences likely reflect varying target audiences—while the former suits official documents, the latter works better for a general readership.

Cultural adaptation varies significantly across versions. Again, DeepL and Google Translate maintain closer formal equivalence to the source, while ChatGPT shows greater localization efforts, using more natural Arabic phrasing and adjusting cultural statements. The treatment of phrases like “day after” varies from literal translations to more conceptual interpretations, demonstrating how AI models navigate the tension between accuracy and naturalness. These findings were analyzed statistically to reveal the following results.

Table 1 illustrates that ChatGPT accomplished the highest mean score of 3.73 in evaluating localization performance from Arabic to English, indicating better performance in comparison to DeepL and Google Translate. Google Translate scored the lowest mean score of 2.20. This pattern suggests that ChatGPT shows the most efficient capabilities in managing the localization of news articles. The standard deviations offer further understanding of the reliability of each model’s performance. DeepL and Google Translate exhibit equivalent standard deviations of 0.414, signifying comparable variability in their localization outcomes. Conversely, ChatGPT’s high standard deviation of 0.799 indicates greater variability in its performance across many cases, potentially attributable to factors like text complexity or the model’s flexibility.

Table 1. Localization Performance Means of AI Models (Arabic into English).

	DeepL	Google Translate	ChatGPT
Mean	3.20	2.20	3.73
Std. Deviation	0.414	0.414	0.799

These results demonstrate the conclusion that ChatGPT outdoes other models in localization quality from Arabic to

English. The increased variety in performance underscores the necessity of assessing consistency in combination with

average efficacy when evaluating AI models for translation and localization tasks.

Table 2 provides key insights into the performance of the three AI models when translating from English to Arabic. The mean ratings demonstrate a clear hierarchy in translation quality, with ChatGPT earning the highest score with the mean value of 4.53, followed by DeepL with the mean value of 3.47, and Google Translate doing much worse with the mean value of 2.13. These disparities are big enough to show meaningful variations in the models' capabilities, with ChatGPT's score approaching the upper limit of what is normally considered high-quality translation. The performance discrepancy between ChatGPT and the other two models demonstrates that contemporary AI models have achieved distinct levels of development, with ChatGPT displaying better capacity to handle the complexity of English-to-Arabic translation.

The standard deviation statistics reveal further information about the performance of the AI models under study. Google Translate has the most variable performance as SD was 0.83, which means that the quality of the translations may not be the same for all items or all attempts. DeepL, on the other hand, has more constant performance with a SD of 0.52, but its average quality is lower than that of

ChatGPT. ChatGPT's moderate SD at 0.64 shows that it usually keeps up with high translation standards, but the quality of the output can nevertheless change from time to time.

These results have important real-world effects for many entities. For organizations and professionals that need to translate from English to Arabic, the results strongly suggest that ChatGPT is the best of the three models. However, it is crucial to remember that these results show overall performance, and the real usefulness of any tool may vary depending on the type of content, the domain, or the level of difficulty. The results show how quickly AI-powered translation tools are getting better, with ChatGPT standing out as a very strong tool for Arabic localization tasks.

The comparative analysis of AI models' performance between Arabic-to-English (Ar-En) and English-to-Arabic (En-Ar) translation directions reveals several noteworthy facts (**Table 3**). The data shows a moderate but consistent translation for English-to-Arabic (En-Ar) translations, with a mean score of 3.38 compared to 3.04 for Arabic-to-English (Ar-En) translations. This directional performance difference suggests that current AI models handle the linguistic transformation from English to Arabic more effectively than Arabic-to-English.

Table 2. Localization Performance Means of AI Models (English into Arabic).

	DeepL	Google Translate	ChatGPT
Mean	3.4667	2.1333	4.5333
Std. Deviation	0.51640	0.83381	0.63994

Table 3. Mean Comparison of AI Models Localization Regarding Language Direction.

	Ar - En	En - Ar
Mean	3.0444	3.3778
Std. Deviation	0.51742	0.58914

Standard deviation values reveal stable translation quality, with Ar-En showing slightly more consistent results than En-Ar. This may be due to the complex morphological structure of Arabic, while Ar-En's narrower distribution suggests more reliable performance in English.

Several technical and linguistic factors likely contribute to these observed differences. From a computational perspective, the performance gap may stem from irregularities in available training data, with many AI systems historically

being developed with stronger English-language resources. Linguistically, Arabic's rich morphology and diglossic nature (the coexistence of Modern Standard Arabic with regional dialects) may create additional challenges for Ar-En translation that are not as pronounced in the reverse direction. The results suggest that while current AI localization systems have achieved functional capability in both directions, the En-Ar pathway appears to be more developed, possibly due to greater commercial demand or research focus on this

translation direction.

5. Discussion

The study evaluated three AI translation models, ChatGPT, DeepL, and Google Translate, in localizing specialized Saudi news items between Arabic and English. It found significant differences in translation quality, cultural adaptation, and terminology precision. In financial translation, ChatGPT consistently outperformed both DeepL and Google Translate, demonstrating domain-specific knowledge and superior formatting of numerical data. In culturally rich and context-sensitive content like sports and religious materials, ChatGPT demonstrated advanced localization capabilities, effectively translating culturally embedded phrases and maintaining sensitivity to metaphor and implied meaning. In religious translations, ChatGPT's performance was particularly impressive, especially in handling formalities like "حفظه الله" (may God protect him). However, performance consistency varied across content types, possibly due to its flexible, generative nature. Translation quality was generally higher in the English-to-Arabic direction, likely due to greater availability of English training data in large-scale AI model training. Inconsistency in transliterating names, formatting numerical data, and handling Arabic complex sentence structure reflects the inherent limitations of current AI translation models. DeepL and Google Translate, in particular, showed a tendency toward employing literal translation, which compromised fluency and cultural adaptation. In the following section, the researcher answered the research questions.

5.1. How Effective are English Translations of Arabic News as Obtained from Three AI Applications, viz., DeepL, Chat GPT, and Google Translate?

To answer the research question, the comparative evaluation presented in the study provided clear evidence of differentiated performance across the three models, with ChatGPT consistently emerging as the most effective tool for translating Arabic news items into English. The analysis covered financial, sports, religious, and political texts drawn from specialized Saudi magazine content. In financial and technical domains, where precision and formatting

are crucial, ChatGPT showed better performance. It accurately translated banking terminology, such as "الشرعية" to the precise financial word "Tier 2," avoiding misleading alternatives like Google Translate's translation "second-tier." Furthermore, ChatGPT adhered to appropriate numerical formatting according to English conventions, e.g., "415 million shares", which is vital for professional clarity. In culturally rooted and religious items, ChatGPT consistently outdid the other AI models. It rendered subtle phrases like "خُطاب جديد" as "new narrative", which is a highly accurate translation, and maintained respectful religious expressions.

In contrast, DeepL and Google Translate frequently resorted to literal, awkward, or partial translations, weakening the intended tone and context. The quantitative data further validates these qualitative observations. In Arabic-to-English translation, ChatGPT had the highest mean value (3.73), followed by DeepL and then Google Translate. Although ChatGPT exhibited greater variability with the value of SD at 0.799, its mean quality was markedly superior in English-to-Arabic translation, which demonstrated marginally greater efficacy across all models under study. These findings correspond with other studies that underscore the significance of context-aware and domain-specific AI translation efficacy^[10,25].

5.2. What is the Extent of Localization Done by AI-Generated Translation in Arabic News Items Compared to Their Corresponding Human Translations?

AI-generated translations of Arabic news content show partial and inconsistent localization compared to human translations. ChatGPT demonstrated the highest level of localization, but still falls short of full human-level adaptation. AI models have made significant progress in handling linguistic nuances but exhibit variability in cultural fluency, idiomatic adaptation, and proper noun transliteration. ChatGPT outperformed other models in naturally adapting culturally embedded expressions. In religious and formal texts, ChatGPT successfully preserved sacred texts and integrated them smoothly into natural sentence structures. All models struggled with consistent transliteration of names and proper nouns, with ChatGPT showing slightly better performance. English-to-Arabic translations

exhibited higher localization quality than Arabic-to-English translations, suggesting AI models handle localization more effectively.

5.3. What are the Most Frequent Types of Localization Issues Identified During the Post-Editing of AI-Generated Arabic News Content, and how do These Issues Vary across Different Categories of News?

The analysis of AI-generated Arabic news items revealed several localization issues, with the severity and type of error varying based on the news domain. One common issue was the literal translation of culturally embedded or figurative expressions, such as phrases like “خطاب جديد” being rendered as “new discourse” or “new approach” by DeepL and Google Translate. ChatGPT was able to localize the expression more naturally to “new narrative,” capturing its intended rhetorical value.

Another issue was the mishandling or omission of religious and formal phrases, particularly in diplomatic or religious texts. In financial and technical content, terminological inconsistency was a major issue, with Google Translate mistranslating the term “الشرعية الثانية” as “second-tier,” suggesting an unintended hierarchical meaning. Transliteration problems were observed in names like “Ala Tannir,” where DeepL and Google Translate offered inconsistent spellings, while ChatGPT provided a more human-like and phonetically accurate form. These errors were more frequent in political and sports content, where proper nouns, metaphors, and culturally nuanced expressions are more prevalent.

5.4. Which of the AI Models Localized Arabic News Items to a Greater Extent than the Other(s)?

ChatGPT, DeepL, and Google Translate were analyzed for their performance in translating Arabic news items into English. ChatGPT demonstrated the highest degree of localization across multiple domains, including financial, sports, religious, and political content. Its superiority lies in grammatical accuracy, contextual fluency, appropriate metaphor translation, and accurate domain-specific terminology. It also retained cultural elements, such as honorifics

in religious texts, which were often omitted or mistranslated by the other models. DeepL produced more literal translations that often lacked stylistic fluency and cultural sensitivity. Google Translate displayed the lowest localization effectiveness, struggling particularly with figurative language, idiomatic expressions, and proper noun handling. ChatGPT also stood out for its more natural sentence structure and consistent use of professional terminology, which are critical for maintaining the tone and clarity of journalistic writing. English-to-Arabic translations exhibited higher localization quality than Arabic-to-English translations. ChatGPT scored 4.53 in En-Ar compared to 3.73 in Ar-En, suggesting that AI models handle localization into Arabic more effectively.

6. Conclusions

The study evaluated the effectiveness of three major AI translation models, ChatGPT, DeepL, and Google Translate, in localizing Arabic news items into English and vice versa. It found that ChatGPT was the most effective tool, demonstrating superior accuracy, contextual awareness, and cultural sensitivity. In financial and technical translation, ChatGPT accurately rendered complex terms and applied appropriate formatting norms. In religious and diplomatic content, it preserved formal expressions and respectful tones that DeepL and Google Translate often misrepresented or omitted. However, the study also revealed limitations of all models, such as inconsistent transliteration of names, literal translation of metaphors, and difficulties in handling complex Arabic syntax. These challenges highlight the current gap between AI-generated and human-level translation, particularly in culturally rich and idiomatically complex material. AI systems were generally more effective at translating from English to Arabic than from Arabic to English, likely due to the greater availability of English training data and the linguistic complexity of Arabic. ChatGPT achieved the highest degree of contextual and stylistic adaptation but still fell short of the nuanced output expected from human translators. Future AI development should focus on enhancing cultural adaptation, metaphor handling, and domain-specific learning to bridge the remaining gaps between AI and human translation performance.

6.1. Recommendations

These results highlight the urgent need for culturally augmented training approaches for AI developers. Three specific improvements are warranted: (1) incorporation of genre-specific parallel corpora with explicit cultural annotations, (2) development of Arabic-focused cultural adaptation modules that go beyond current neural methods, and (3) implementation of real-time cultural validation mechanisms through collaborative human-AI workflows.

For news organizations, a tiered translation strategy is recommended: AI tools may provide initial drafts for sports, health, and financial content, while political, diplomatic, and social news should undergo mandatory human localization. This approach balances efficiency with cultural precision, addressing Bian's call for "context-aware automation" in media translation^[2].

Academic researchers should prioritize two avenues: longitudinal studies tracking AI localization improvements (or regressions) across model iterations, and experimental interventions testing whether targeted cultural training datasets can reduce the observed error rates. The development of standardized Arabic localization benchmarks would significantly advance this field.

6.2. Implications

The practical implications extend beyond technical translation challenges. First, media outlets using unedited AI translations risk propagating cultural inaccuracies that could affect international relations—particularly in the politically volatile MENA region. Second, the demonstrated limitations suggest that professional translators should reposition themselves as cultural localization experts rather than mere linguistic intermediaries. Third, these findings argue for regulatory frameworks requiring transparency about AI use in news translation, enabling audiences to assess content reliability.

From a theoretical perspective, the results challenge prevailing assumptions about neural networks' cultural adaptation capabilities. While AI excels at pattern recognition, the study demonstrates that cultural localization requires interpretive skills that current systems lack. This supports Barrat's caution about overestimating AI's contextual intelligence

and reinforces the need for human-centered approaches in linguistically sensitive domains^[1].

Author Contributions

Conceptualization, M.H.A.; methodology, M.H.A.; software, A.A.M.H.A.A.; validation, A.A.M.H.A.A.; formal analysis, M.H.A.; investigation, A.A.M.H.A.A.; resources, A.A.M.H.A.A.; data curation, A.A.M.H.A.A.; writing—original draft preparation, A.A.M.H.A.A.; writing—review and editing, A.A.M.H.A.A.; visualization, M.H.A.; supervision, M.H.A.; project administration, M.H.A.; funding acquisition, M.H.A. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

Appendix A

Table A1. Translating Arabic News Items.

No	Statements	DeepL	GT	Chat GPT	Human
1	بلغت القيمة الاسمية للبندولة يوسف الشركة الاقتصادية اليومية لوكالة الأنباء السعودية السوق الاسمية السعودية (514) مليون سهم، سجلت فيها اسهم (231) شركة ارتفاعا في قيمتها، وأغلقت اسهم (611) شركة على تراجع.	According to the Saudi Press Agency's daily economic bulletin for the Saudi stock market, the amount of shares traded amounted to (415) million shares, in which the shares of (132) companies increased in value, and the shares of (116) companies closed down.	According to the Saudi Press Agency's daily economic bulletin for the Saudi Stock Exchange, the volume of traded shares reached (415) million shares, with the shares of (132) companies recording an increase in their value, while the shares of (116) companies closed in decline.	According to the daily economic bulletin of the Saudi Press Agency for the Saudi Stock Exchange, the volume of traded shares reached 415 million, with the shares of 132 companies increasing in value, while 116 companies closed lower.	According to the daily economic report of the Saudi Press Agency for the Saudi Stock Exchange, the volume of traded shares reached 415 million, with the shares of 132 companies increasing in value, while 116 companies closed at a decreasing value.
2	وكانت اسهم شركات شمس، وأيان، وسمو، وبوروو للتأمين، وشمكين، الكشر ارتفاعا، أما اسهم شركات ميان، وأسمنت أم القرى، وكفان السعودية، والبراعي، وحلواني إخواني الكشر انخفاضاً في العمليات، وتراجعت نسب الارتفاع والانخفاض ما بين (46.9%) و(53.3%).	The shares of Shams, Ayan, Samo, Boroog Insurance, and Tamkeen were the most active, while the shares of Miyahna, Umm Al-Qura Cement, Kayan Saudi Arabia, Almarai, and Halwani Brothers were the most active, and the percentages of increase and decrease ranged between (9.64%) and (3.35%).	The shares of Shams, Ayan, Sumou, Buruj Insurance, and Tamkeen were the highest risers, while the shares of Miyahuna, Umm Al-Qura Cement, Saudi Kayan, Almarai, and Halwani Brothers were the lowest in trading. The percentages of rise and fall ranged between (9.64%) and (3.35%)	The shares of Shams, Ayyan, Sumo, Burooj Insurance, and Tamkeen recorded the highest increases, while Miyahuna, Umm Al-Qura Cement, SABIC, Almarai, and Halwani Bros had the most declines. The rates of increase and decrease ranged between 9.64% and 3.35%.	The shares of Shams, Ayyan, Sumo, Burooj Insurance, and Tamkeen companies recorded the highest increases, while Miyahuna, Umm Al-Qura Cement, SABIC, Almarai, and Halwani Bros had the most declines. The rates of increase and decrease ranged between 9.64% and 3.35%.
3	نيابة عن صاحب السمو الملكي الأمير محمد بن سلمان بن عبدالعزیز آل سعود، ولي العهد رئيس مجلس الوزراء - حفظه الله، شارك صاحب السمو الأمير فaisal بن فرحان بن عبدالله وزير الخارجية، اليوم بمبادرة ريو دي جانيرو البرازيلية، في الجلسة الأولى من أعمال اليوم الثاني للقمة السابعة عشرة لمجموعة برسيكس 2025، التي تشارك فيها المملكة لدولة مدعوة للانضمام إلى المجموعة، التي جاءت بعنوان: (البيئية.. مؤتمر الأطراف لاتفاقية الأمم المتحدة COP30 بشأن تغير المناخ "COP30" ... والوصح والبيئة).	On behalf of His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister, His Royal Highness Prince Faisal bin Farhan bin Abdullah, Minister of Foreign Affairs, participated today in the first session of the second day of the 17th BRICS 2025 Summit, in which the Kingdom participates as an invited country to join the group. The Conference of the Parties to the United Nations Convention on Climate Change "COP30" ... and global health).	On behalf of His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister - may God protect him - His Highness Prince Faisal bin Farhan bin Abdullah, Minister of Foreign Affairs, participated today in Rio de Janeiro, Brazil, in the first session of the second day of the 17th BRICS Summit 2025. The Kingdom is participating as an invited country to join the group. The session was titled: "Environment... COP30... and Global Health.	On behalf of His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister—may God protect him—His Highness Prince Faisal bin Farhan bin Abdullah, Minister of Foreign Affairs, participated today in Rio de Janeiro, Brazil, in the first session of the second day of the 17th BRICS Summit 2025, in which the Kingdom is participating as a guest country invited to join the group.	On behalf of His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister—may God protect him—His Highness Prince Faisal bin Farhan bin Abdullah, Minister of Foreign Affairs, participated today in Rio de Janeiro, Brazil, in the first session of the second day of the 17th BRICS Summit 2025, in which the Kingdom is participating as a guest country invited to join the group.
4	حضر الجلسة سفير خادم البحرين الشريفين لدى جمهورية البرازيل الاتحادي فيصل غلام، ومدير عام مكتب سجو الوزير وليد السماعيل، ومستشار سمو وزير محمد البحري، ومدير عام المنظمات الدولية شاهر الخناني.	The session was attended by Ambassador of the Custodian of the Two Holy Mosques to the Federal Republic of Brazil Faisal Ghulam, Director General of the Office of H.H. the Minister Walid Al-Samael, Advisor to H.H. the Minister Mohammed Al-Yahya, and Director General of International Organizations Shaher Al-Khanini.	. " The session was attended by Faisal Ghulam, Ambassador of the Custodian of the Two Holy Mosques to the Federative Republic of Brazil; Walid Al-Samael, Director General of the Minister's Office; Mohammed Al-Yahya, Advisor to His Highness the Minister; and Shaaher Al-Khonaini, Director General of International Organizations.	The session was attended by the Saudi Ambassador to the Federative Republic of Brazil, Faisal Ghulam; Director General of the Minister's Office, Waleed Al-Samaeel; Minister's Advisor, Mohammed Al-Yahya; and Director General of International Organizations, Shahir Al-Khanini.	The session was attended by the Saudi Ambassador to the Federative Republic of Brazil, Faisal Ghulam; Director General of the Minister's Office, Waleed Al-Samaeel; Minister's Advisor, Mohammed Al-Yahya; and Director General of International Organizations, Shahir Al-Khanini.
5	طال بات يمثل اوجة حقيقي للثروة الناعمة السعودية. فما تحقق في هذه البطولة، وما تحقق قبله، ليس ان عكاس لا عمل رياضي فقط، بل تتويجا لنتوجه دولة تساهم في الإنسان، والبيئة والتنمية، والوطني، وتساهم الرياضة لإدانة للجمهور إلى الغرضاء الدولي بخطاب جديد، جامع بين المنافسة والاقتصاد والثقافة. وهذا الحضور الدولي للرياضة يعزز صورة المملكة كبرقز أوليبي وعالمي لأحداث البطولات، وتنظيم الأحداث الرياضية الكبرى، وقادة صناعة رياضية ذات عوائد طويلة المدى.	Hilal has become the true face of Saudi soft power. What was achieved in this tournament, and what was achieved before it, is not only a reflection of a sporting action, but the culmination of a country that invests in people, infrastructure, and governance, and uses sports as a tool to cross into the international space with a new discourse that combines competition, economy, and culture. Al Hilal's international presence reinforces the Kingdom's image as a regional and global center for hosting tournaments, organizing major sporting events, and driving a sports industry with long-term returns.	Hilal has become a true showcase for Saudi soft power. What has been achieved in this tournament, and what has preceded it, is not just a reflection of sporting achievement, but rather the culmination of a country's approach that invests in people, infrastructure, and governance, and uses sports as a tool to cross the international stage with a new discourse that combines competition, economy, and culture. Al-Hilal's international presence enhances the Kingdom's image as a regional and global hub for hosting championships, organizing major sporting events, and leading a sports industry with long-term returns.	Al-Hilal now represents a genuine front for Saudi soft power. What has been achieved in this championship—and previously—is not merely the result of athletic performance, but a reflection of a national vision investing in human capital, infrastructure, and governance, using sports as a tool to reach the international stage with a new narrative that combines competition, economy, and culture. This international presence of Al-Hilal enhances the Kingdom's image as a regional and global center for hosting championships, organizing major sports events, and leading a sports industry with long-term returns.	Al-Hilal now represents a genuine front for Saudi soft power. What has been achieved in this championship—and previously—is not merely the result of athletic performance, but a reflection of a national vision investing in human capital, infrastructure, and governance, using sports as a tool to reach the international stage with a new narrative that combines competition, economy, and culture. This international presence of Al-Hilal enhances the Kingdom's image as a regional and global center for hosting championships, organizing major sports events, and leading a sports industry with long-term returns.
6	سجلت المنافذ الجمركية البحرية والبحرية والجمركية (4331) حالة ضبط للممنوعات، وذلك في إطار الجهود المستمرة التي تبذلها هيئة الزكاة والضريبة والجمارك، لتعزيز الجانب الأمني وحماية المجتمع من الممنوعات وتجارة الأدوية والاتكال.	Land, sea and air customs outlets recorded (1334) cases of seizure of contraband, as part of the ongoing efforts of the Zakat, Tax and Customs Authority to enhance the security aspect and protect society from contraband of various types and forms.	Land, sea, and air customs ports recorded (1,334) seizures of contraband, as part of the ongoing efforts of the Zakat, Tax, and Customs Authority to enhance security and protect society from all types and forms of contraband.	Land, sea, and air customs outlets recorded 1,334 seizures of prohibited items, as part of the continuous efforts by the Zakat, Tax, and Customs Authority to enhance security and protect society from all types and forms of contraband.	Land, sea, and air customs outlets recorded 1,334 seizures of prohibited items, as part of the continuous efforts by the Zakat, Tax, and Customs Authority to enhance security and protect society from all types and forms of contraband.

Table A1. Cont.

No	Statements	DeepL	GT	Chat GPT	Human
7	وشملت الأصناف المضبوطة (711) من فئات المواد المخدرة، مثل الحشيش، والكوكايين، والهيروين، والشابو، وجيوب الكبتاجون وغيرها، إضافة إلى 007 من المواد المحظورة.	The seized items included (117) items of narcotic substances, such as hashish, cocaine, heroin, shabu, Captagon pills and others, in addition to 700 prohibited items.	The seized items included (117) types of narcotics, such as hashish, cocaine, heroin, shabu, Captagon pills, and others, in addition to 700 prohibited substances.	The seized items included 117 types of narcotics, such as hashish, cocaine, heroin, shabu, and Captagon pills, in addition to 700 prohibited materials.	The seized items included 117 types of narcotics, such as hashish, cocaine, heroin, shabu, and Captagon pills, in addition to 700 prohibited materials.
8	أعلن نادي النصر مساء اليوم الأحد، إعارة مهاجم الفولومبي جون دوران إلى فريق فنربخشة التركي، خلال فترة الانتقالات الصيفية الجارية.	On Sunday evening, Al-Nasr Club announced the loan of Colombian striker John Duran to the Turkish team Fenerbahçe during the current summer transfer period.	Al-Nasr Club announced this evening, Sunday, the loan of its Colombian striker, John Duran, to the Turkish team, Fenerbahçe, during the current summer transfer period.	Al-Nasr Club announced on Sunday evening the loan of its Colombian striker John Duran to the Turkish club Fenerbahçe during the ongoing summer transfer window.	Al-Nasr Club announced on Sunday evening the loan of its Colombian striker John Duran to the Turkish club Fenerbahçe during the ongoing summer transfer window.
9	أعلن بنك الرياض، اليوم الاثنين، عن بدء طرء هادات ائتمان من الشريحة الثانية بقيمة بالدولار الأمريكي بموجب برنامجه الدولي لإصدار هادات ائتمانية.	Riyad Bank announced today, Monday, that it has started offering US dollar-denominated second tranche credit certificates under its international credit certificate issuance program.	Riyadh Bank announced today, Monday, the launch of the second-tier credit certificates denominated in US dollars under its international credit certificate issuance program.	Riyad Bank announced on Monday the commencement of offering Tier 2 credit certificates denominated in U.S. dollars, under its international certificate issuance program.	Riyad Bank announced on Monday the commencement of offering Tier 2 credit certificates denominated in U.S. dollars, under its international certificate issuance program.
10	وقال البنك، في بيان على "تداول السعودية"، إنه سيتم تحديد القيمة النهائية وشروط طرء هادات ائتمان بناء على ظروف السوق، حيث ينتهي الطرء غدا الثلاثاء الموافق 6 يوليو 2025.	In a statement on Saudi Tadawul, the bank said that the final value and terms of the offering will be determined based on market conditions, as the offering ends tomorrow, Tuesday, July 6, 2025.	The bank stated in a statement on the Saudi Stock Exchange (Tadawul) that the final value and terms of the trust certificate offering will be determined based on market conditions, with the offering ending tomorrow, Tuesday, July 6, 2025.	The bank stated, via "Tadawul Saudi," that the final value and terms of the offering will be determined based on market conditions, with the offering concluding on Tuesday, July 6, 2025.	The bank stated, via "Tadawul Saudi," that the final value and terms of the offering will be determined based on market conditions, with the offering concluding on Tuesday, July 6, 2025.
11	وعين البنك كلاً من بنك دي بي إس إل تي دي، وبنك إتش إس بي سي بي إل سي، وجي بي مورغان سيكيوريتيز بي إل سي، وشركة ميريل لينش الدولية، وشركة ميزوهو الدولية، وشركة الرياض المالية، وبنك إس إم بي سي إنسترون افرونل بي إل سي، وبنك ستاندرد تشارتد مشتركين كمديريين للائتمانب.	DBS LTD, HSBC Bank plc, JPMorgan Securities plc, Merrill Lynch International, Mizuho International, Riyad Capital, SMBC International plc and Standard Chartered Bank plc have been appointed as joint bookrunners.	The bank appointed DBS Bank Ltd., HSBC Bank PLC, JPMorgan Securities PLC, Merrill Lynch International, Mizuho International, Riyad Capital, SMBC International PLC, and Standard Chartered Bank as joint lead managers for the offering.	The bank appointed DBS Bank Ltd., HSBC PLC, J.P. Morgan Securities PLC, Merrill Lynch International, Mizuho International, Riyad Capital, SMBC International PLC, and Standard Chartered Bank as joint lead managers.	The bank appointed DBS Bank Ltd., HSBC PLC, J.P. Morgan Securities PLC, Merrill Lynch International, Mizuho International, Riyad Capital, SMBC International PLC, and Standard Chartered Bank as joint lead managers.
12	ويجوز استرداد هادات ائتمان في حالات معينة حسب ما هو مفصل في ميثاق الطرء الأساسي المتعلق بشهادات ائتمان.	The trust certificates may be redeemed in certain circumstances as detailed in the underlying offering document relating to the trust certificates.	The trust certificates may be redeemed in certain circumstances, as detailed in the basic offering document for the trust certificates.	The credit certificates may be redeemed in certain cases as detailed in the main offering prospectus.	The credit certificates may be redeemed in certain cases as detailed in the main offering prospectus.
13	طلقت رئاسة الشؤون الدينية بالمسجد الحرام والمجمع النبوي، مبادرة "إثراء قاصدينا زُجراً لمنحهم" بالمسجد الحرام، في إطار الخطة التشغيلية الموسمعة لعام 1441هـ لتأثير تجربة القاصدين الميامية.	The Presidency of Religious Affairs at the Grand Mosque and the Prophet's Mosque launched the "Enriching Our Guests, Enhancing Our Employees" initiative at the Grand Mosque as part of the operational plan for the Ummrah season of 1447 AH to enrich the faith experience of those who come to the Grand Mosque.	The Presidency of Religious Affairs at the Grand Mosque and the Prophet's Mosque launched the "Enriching Our Visitors, Honoring Our Staff" initiative at the Grand Mosque, as part of the operational plan for the 1447 AH Ummrah season, to enrich the faith-based experience of pilgrims	The Presidency for Religious Affairs at the Grand Mosque and the Prophet's Mosque launched the initiative "Enriching Our Pilgrims, Honoring Our Staff" at the Grand Mosque, as part of the operational plan for the 1447 AH Ummrah season, aiming to enrich pilgrims' spiritual experience.	The Presidency for Religious Affairs at the Grand Mosque and the Prophet's Mosque launched the initiative "Enriching Our Pilgrims, Honoring Our Staff" at the Grand Mosque, as part of the operational plan for the 1447 AH Ummrah season, aiming to enrich pilgrims' spiritual experience.
14	وأوضحت الرئاسة أن المبادرة تتضمن خدمة توجيهية مبدئية، وإرشادية للمعتمدين والمصلين، إضافة إلى تنويع الخدمات، والإكسابات الإثرائية، والإهداءات على المعتمدين بالمسجد الحرام بهدف إثراء تجربة الزائرين الميامين، وتعزيز مسار الرحلة التعبدية من خلال استئثار التقنيات والتطبيقات الذكية، الحرص على إيصال رسالة الشريفة الوسطية السامية للعالم.	The Presidency explained that the initiative includes a package of field awareness and guidance services for pilgrims and worshippers, in addition to the distribution of Qurans, enriching booklets and gifts to pilgrims in the Grand Mosque, with the aim of enriching the visitors' faith experience and enhancing the path of the devotional journey by utilizing technology and smart applications to communicate the message of the Two Holy Mosques to the world.	The Presidency explained that the initiative includes a package of field awareness and guidance services for pilgrims and worshippers, in addition to the distribution of copies of the Holy Quran, enrichment brochures, and gifts to pilgrims at the Grand Mosque. The initiative aims to enrich the visitors' religious experience and enhance their devotional journey by leveraging technology and smart applications to convey the noble message of moderation of the Two Holy Mosques to the world.	The Presidency explained that the initiative includes field awareness and guidance services, distribution of Qur'ans, enrichment booklets, and gifts to pilgrims at the Grand Mosque, to enhance their spiritual journey, and promote the balanced message of the Two Holy Mosques to the world using technology and smart applications.	The Presidency explained that the initiative includes field awareness and guidance services, distribution of Qur'ans, enrichment booklets, and gifts to pilgrims at the Grand Mosque, to enhance their spiritual journey, and promote the balanced message of the Two Holy Mosques to the world using technology and smart applications.
15	تهدف المبادرة إلى تثقيف الصلة مع المعتمدين، وتحقيق الأثر الإيجابي للقاصدي المسجد الحرام، بمحطات وبرامج إثرائية لهم بما يعينهم على أداء عباداتهم بكل يسر وسهولة، تحقيقاً لتطلعات دولة الأمر في خدمة قاصدي وزارتي الحرمين الشريفين.	The initiative aims to strengthen the relationship with Ummrah pilgrims and achieve a positive impact for visitors to the Grand Mosque, with campaigns and enrichment programs to help them perform their worship with ease and ease, in fulfillment of the aspirations of the rulers of the Two Holy Mosques in serving the pilgrims and visitors.	The initiative aims to strengthen ties with pilgrims and positively impact those visiting the Grand Mosque through enriching campaigns and programs that help them perform their rituals with ease and convenience, fulfilling the aspirations of the rulers to serve pilgrims and visitors to the Two Holy Mosques.	The initiative aims to strengthen engagement with pilgrims and generate positive impact through enrichment programs that assist them in performing their rituals with ease—in line with the aspirations of the Saudi leadership in serving pilgrims and visitors of the Two Holy Mosques.	The initiative aims to strengthen engagement with pilgrims and generate positive impact through enrichment programs that assist them in performing their rituals with ease—in line with the aspirations of the Saudi leadership in serving pilgrims and visitors of the Two Holy Mosques.

Table A2. Translating English News Items.

No	Statements	DeepL	GT	Chat GPT	Human
1	It is Ala Tannir's family's home, which she entered for the first time in 2021, a year after the Beirut Port explosion in 2020. For decades, it had been rented out to a woman, but she vacated it following the blast.	إنه منزل عائيلة آلاء تاننير، الذي دخلته لأول مرة في عام 1202، بعد عام من انفجار مرفأ بيروت في عام 2020. لقد عود من الزمن، كان المنزل مؤجراً لامرأة، ولكنها غادرت به بعد الانفجار.	إنه منزل عائيلة آلاء تاننير، الذي دخلته لأول مرة في عام 1202، بعد عام من انفجار مرفأ بيروت في عام 2020. لقد عود من الزمن، كان المنزل مؤجراً لامرأة، ولكنها غادرت به بعد الانفجار.	إنه منزل عائيلة آلاء تاننير، الذي دخلته لأول مرة في عام 1202، بعد عام من انفجار مرفأ بيروت في عام 2020. لقد كان مؤجر لامرأة طوال العقود، ولكنها تركته بعد الانفجار.	إنه منزل عائيلة آلاء تاننير، الذي دخلته لأول مرة في عام 1202، بعد عام من انفجار مرفأ بيروت في عام 2020. لقد كان مؤجر لامرأة طوال العقود، ولكنها تركته بعد الانفجار.
2	When the house was built in 1925 (official records mistakenly list it as 1935), it had only two storeys, but in the 1950s, Aziz travelled to Saudi Arabia to work in a printing press, saving enough money to add a third floor. He has lived there ever since	عندما تم بناء المنزل في عام 5291 (تشير السجلات الرسمية خطأ على أنه عام 5391)، كان مشوفاً من طابقين فقط، ولكن في الخمسينيات، سافر عزيز إلى المملكة العربية السعودية للعمل في مطبعة، وادخر ما يكفي من المال لإضافة طابق ثالث. وقد عاش هناك منذ ذلك الحين.	عندما بُني المنزل في عام 5291 (أدرجته السجلات الرسمية خطأ على أنه عام 5391)، كان يحتوي على طابقين فقط، ولكن في الخمسينيات من القرن الماضي، سافر عزيز إلى المملكة العربية السعودية للعمل في مطبعة، وادخر ما يكفي من المال لإضافة طابق ثالث. وقد عاش هناك منذ ذلك الحين.	عندما تم بناء المنزل في عام 5291 (سجلات رسمية تعتبره عام 5391)، كان لديه طابقين فقط، ولكن في الخمسينيات من القرن الماضي، سافر عزيز إلى المملكة العربية السعودية للعمل في مطبعة، وتشكل من تسوير ما يكفي من المال لإضافة طابق ثالث. وهو يعيش هناك منذ ذلك الحين.	عندما تم بناء المنزل في عام 5291 (سجلات رسمية تعتبره عام 5391)، كان لديه طابقين فقط، ولكن في الخمسينيات من القرن الماضي، سافر عزيز إلى المملكة العربية السعودية للعمل في مطبعة، وتشكل من تسوير ما يكفي من المال لإضافة طابق ثالث. وهو يعيش هناك منذ ذلك الحين.
3	The key question now is, how to build on this success and promote lasting stability in a region that has seen little of it. The first step is to strengthen containment of Iran, but the details of this task are critical to its success.	السؤال الرئيسي الآن هو: كيف يمكن البناء على هذا النجاح وتعزيز الاستقرار الدائم في منطقة لم تشهد الكثير من الخطوات الأولى في تعزيز احتواء إيران، لكن تفاصيل هذه المهمة حاسمة لنجاحها.	السؤال الرئيسي الآن هو: كيف يمكن البناء على هذا النجاح وتعزيز الاستقرار الدائم في منطقة لم تشهد الكثير من الخطوات الأولى في تعزيز احتواء إيران، لكن تفاصيل هذه المهمة حاسمة لنجاحها.	السؤال الرئيسي الآن هو، كيف يمكن البناء على هذا النجاح وتعزيز الاستقرار الدائم في منطقة لم تشهد الكثير من الخطوات الأولى في تعزيز احتواء إيران، لكن تفاصيل هذه المهمة حاسمة لنجاحها.	السؤال الرئيسي الآن هو، كيف يمكن البناء على هذا النجاح وتعزيز الاستقرار الدائم في منطقة لم تشهد الكثير من الخطوات الأولى في تعزيز احتواء إيران، لكن تفاصيل هذه المهمة حاسمة لنجاحها.
4	That will change to some degree in this "day after." Not because President Trump has lost interest in this important region, but because his views on where—and where not—the US could be helpful have evolved.	سيتم تغيير ذلك إلى حد ما في "اليوم التالي". ليس لأن الرئيس ترامب فقد اهتمامه بهذه المنطقة المهمة، بل لأن آرائه حول المكان الذي يمكن أن تساهم فيه الولايات المتحدة والأمم المتحدة التي لا يمكنها المساعدة قد تطورت.	سيتم تغيير هذا إلى حد ما في "اليوم التالي". ليس لأن الرئيس ترامب فقد الاهتمام بهذه المنطقة المهمة، ولكن لأن آرائه حول أين وأين لا يمكن للولايات المتحدة أن تساهم مفيدة قد تطورت. إ	سيحدث تغيير إلى حد ما في "اليوم بعد". ليس لأن الرئيس ترامب فقد اهتمامه بهذه المنطقة المهمة، بل لأن وجهات نظره حول المكان الذي يمكن أن تساهم فيه الولايات المتحدة مفيدة، والمكان الذي لا يمكن أن تساهم فيه، قد تطورت.	سيحدث تغيير إلى حد ما في "اليوم بعد". ليس لأن الرئيس ترامب فقد اهتمامه بهذه المنطقة المهمة، بل لأن وجهات نظره حول المكان الذي يمكن أن تساهم فيه الولايات المتحدة مفيدة، والمكان الذي لا يمكن أن تساهم فيه، قد تطورت.
5	The "where not" here is important, as Trump's political base includes many who favour isolationism. They can be persuaded, as the recent strike on Iran has shown, but only if American commitments are short, low-cost, and visibly necessary to advance interests that Americans accept as legitimate.	إن "المكان الذي لا يمكن المساعدة فيه" مهم هنا، لأن قاعدة ترامب السياسية تتضمن العديد من المؤيدين للعزلة. يمكن إقناعهم، كما أظهرت الضربة الأخيرة على إيران، ولكن فقط إذا كانت التزامات الولايات المتحدة قصيرة الأمد ومنخفضة التكلفة، وضرورية بشكل واضح لتعزيز المصالح التي يقبلها الأمريكيون على أنها مشروع.	ن "حيث لا" هنا مهم، حيث تتضمن القاعدة السياسية لترامب العديد من يفضلون العزلة. ويمكن إقناعهم، كما أظهرت الضربة الأخيرة على إيران، ولكن فقط إذا كانت الالتزامات الأمريكية قصيرة ومنخفضة التكلفة، وضرورية بشكل واضح لتعزيز المصالح التي يقبلها الأمريكيون على أنها مشروع.	الـ"مكان الذي لا يمكن أن تساهم فيه" هنا مهم، حيث إن القاعدة الشعبية لترامب تشمل العديد من يفضلون العزلة. يمكن إقناعهم، كما أظهر الهجوم الأخير على إيران، ولكن فقط إذا كانت الالتزامات الأمريكية قصيرة الأمد، ومنخفضة التكلفة، وضرورية بشكل واضح لتعزيز مصالح يقبلها الأمريكيون كالمصالح مشروع.	الـ"مكان الذي لا يمكن أن تساهم فيه" هنا مهم، حيث إن القاعدة الشعبية لترامب تشمل العديد من يفضلون العزلة. يمكن إقناعهم، كما أظهر الهجوم الأخير على إيران، ولكن فقط إذا كانت الالتزامات الأمريكية قصيرة الأمد، ومنخفضة التكلفة، وضرورية بشكل واضح لتعزيز مصالح يقبلها الأمريكيون كالمصالح مشروع.
6	The region thus should take seriously the sketch of American Middle East Policy that Trump laid out in his May Riyadh speech.	لذلك، يجب على المنطقة أن تتأخذ على محمل الجد مخطط السياسة الأمريكية تجاه الشرق الأوسط الذي وضعه ترامب في خطابه في الرياض في مايو.	وبالتالي، يجب على المنطقة أن تتأخذ على محمل الجد مخطط السياسة الأمريكية تجاه الشرق الأوسط الذي وضعه ترامب في خطابه في الرياض في مايو.	يجب على المنطقة أن تتأخذ على محمل الجد تصور السياسة الأمريكية تجاه الشرق الأوسط الذي وضعه ترامب في خطابه بالرياض في مايو.	يجب على المنطقة أن تتأخذ على محمل الجد تصور السياسة الأمريكية تجاه الشرق الأوسط الذي وضعه ترامب في خطابه بالرياض في مايو.
7	In his vision, the US aims to be the actor of last resort—an over-the-horizon security guarantor willing to act only when critically important.	في رؤيته، تهدف الولايات المتحدة إلى أن تكون الفاعل الأخير - ضامن أمني بعيد المدى - مستعداً للتدخل فقط عندما يكون ذلك ضرورياً للغاية.	وفي رؤيته، تهدف الولايات المتحدة إلى أن تكون الفاعل الأخير - ضامن أمني فوق الأفق - مستعداً للتدخل فقط عندما يكون الأمر مهماً للغاية.	في رؤيته، تهدف الولايات المتحدة إلى أن تكون الفاعل الأخير - ضامن أمني يتجاوز الحدود - مستعداً للتدخل فقط عندما يكون الأمر جيوياً للغاية.	في رؤيته، تهدف الولايات المتحدة إلى أن تكون الفاعل الأخير - ضامن أمني يتجاوز الحدود - مستعداً للتدخل فقط عندما يكون الأمر جيوياً للغاية.
8	The US bombing of Iranian nuclear sites is a clear example.	ويعد قصف الولايات المتحدة للمواقع النووية الإيرانية مثالاً واضحاً على ذلك.	إن قصف الولايات المتحدة للمواقع النووية الإيرانية هو مثال واضح.	الهجوم الجوي الأمريكي على المواقع النووية الإيرانية هو مثال واضح على ذلك.	الهجوم الجوي الأمريكي على المواقع النووية الإيرانية هو مثال واضح على ذلك.
9	Trump made a point to emphasize his confidence in the region's ability to address many of its problems independently.	وقد حرص ترامب على التأكيد على ثقته في قدرة المنطقة على معالجة العديد من مشاكلها بشكل مستقل.	وقد أكد ترامب على ثقته في قدرة المنطقة على معالجة العديد من مشاكلها بشكل مستقل.	أكد ترامب على ثقته في قدرة المنطقة على معالجة العديد من مشاكلها بشكل مستقل.	أكد ترامب على ثقته في قدرة المنطقة على معالجة العديد من مشاكلها بشكل مستقل.
10	The American security umbrella will focus, in concert with Israel, on Iran's direct strategic threats, but dealing with Tehran's residual proxy networks in the region—from Gaza and Lebanon to Iraq, Syria, and Yemen—should be more of a function of regional states, in an informal coalition.	وستركز المظلة الأمنية الأمريكية، بالتعاون مع إسرائيل، على التهديدات الاستراتيجية المباشرة لإيران، ولكن التعامل مع شبكات الولاء المتبقية لطران في المنطقة - من غزة ولبنان إلى العراق وسوريا واليمن - يجب أن يكون من اختصاص دول المنطقة، في تحالف غير رسمي.	وستركز المظلة الأمنية الأمريكية، بالتعاون مع إسرائيل، على التهديدات الاستراتيجية المباشرة لإيران، ولكن التعامل مع شبكات الولاء المتبقية لطران في المنطقة - من غزة ولبنان إلى العراق وسوريا واليمن - يجب أن يكون أكثر من وظيفة للدول الإقليمية، في تحالف غير رسمي.	سيتركز المظلة الأمنية الأمريكية، بالتعاون مع إسرائيل، على التهديدات الاستراتيجية المباشرة من إيران، لكن التعامل مع شبكات الولاء المتبقية لإيران في المنطقة - من غزة ولبنان إلى العراق وسوريا واليمن - ينبغي أن يكون وظيفة الدول الإقليمية، ضمن تحالف غير رسمي.	سيتركز المظلة الأمنية الأمريكية، بالتعاون مع إسرائيل، على التهديدات الاستراتيجية المباشرة من إيران، لكن التعامل مع شبكات الولاء المتبقية لإيران في المنطقة - من غزة ولبنان إلى العراق وسوريا واليمن - ينبغي أن يكون وظيفة الدول الإقليمية، ضمن تحالف غير رسمي.
11	This makes sense, first, because Arab states and Türkiye—which neighbour states that harbour proxy networks—have a keen interest in weakening these groups and Iran's control over them.	وهذا أمر منطقي، أولاً، لأن الدول العربية وتركيا - التي تتاور الدول التي تاي شبكات الولاء لديها - مصلحة في إضعاف هذه الجماعات وسيطرة إيران عليها.	هذا منطقي، أولاً، لأن الدول العربية وتركيا - وهي دول مجاورة تتورق شبكات بالوكالة - لديها مصلحة في إضعاف هذه الجماعات وسيطرة إيران عليها.	هذا منطقي، أولاً، لأن الدول العربية وتركيا - التي تتأخر دول مجاورة وتحتضن شبكات الولاء - لديها مصلحة جيوية في إضعاف هذه الجماعات وسيطرة إيران عليها.	هذا منطقي، أولاً، لأن الدول العربية وتركيا - التي تتأخر دول مجاورة وتحتضن شبكات الولاء - لديها مصلحة جيوية في إضعاف هذه الجماعات وسيطرة إيران عليها.

Table A2. Cont.

No	Statements	DeepL	GT	Chat GPT	Human
12	The following is a working plan for regional players to further weaken proxies, although I outline areas where the US could potentially act.	فيما يلي خطة عمل للأطراف الإقليمية لزيادة إضعاف الوكلاء، على الرغم من أنني أورد المجالات التي يمكن أن تتدخل فيها الولايات المتحدة.	فيما يلي خطة عمل للأطراف الإقليمية لزيادة إضعاف الوكلاء، على الرغم من أنني أشرت للمجالات التي يمكن للولايات المتحدة أن تتدخل فيها.	وفيما يلي خطة عمل للأطراف الإقليمية لزيادة إضعاف الوكلاء، على الرغم من أنني أبرز المناطق التي يمكن للولايات المتحدة أن تتدخل فيها بشكل محتمل.	وفيما يلي خطة عمل للأطراف الإقليمية لزيادة إضعاف الوكلاء، على الرغم من أنني أبرز المناطق التي يمكن للولايات المتحدة أن تتدخل فيها بشكل محتمل.
13	Other actors are less important. Broadly, the European Union and Britain support US goals, but beyond financial support, can undertake little independently on regional security.	الأطراف الأخرى أقل أهمية. بشكل عام، يدعم الاتحاد الأوروبي وبريطانيا أهداف الولايات المتحدة، ولكن بخلاف الدعم المالي، لا يمكنهما القيام بشيء بشكل مستقل فيما يتعلق بالأمن الإقليمي.	الجهات الفاعلة الأخرى أقل أهمية. بشكل عام، يدعم الاتحاد الأوروبي وبريطانيا أهداف الولايات المتحدة، ولكن بخلاف الدعم المالي، لا يمكنهما القيام بالفتير بشكل مستقل بشأن الأمن الإقليمي.	اللاعبون الآخرون أقل أهمية. بشكل عام، تدعم الاتحاد الأوروبي وبريطانيا أهداف الولايات المتحدة، لكن بخلاف الدعم المالي، لا يمكنهما القيام بالفتير بشكل مستقل على صعيد الأمن الإقليمي.	اللاعبون الآخرون أقل أهمية. بشكل عام، تدعم الاتحاد الأوروبي وبريطانيا أهداف الولايات المتحدة، لكن بخلاف الدعم المالي، لا يمكنهما القيام بالفتير بشكل مستقل على صعيد الأمن الإقليمي.
14	China and Russia have been largely powerless during the 20-month campaign raging throughout the region, despite their important niche role in the Security Council.	لحانت الصين وروسيا عاجزين إلى حد كبير خلال الحملة التي استمرت 02 شهراً في جميع أنحاء المنطقة، على الرغم من دورهما المهم في مجلس الأمن.	لحانت الصين وروسيا عاجزين إلى حد كبير خلال الحملة التي استمرت 02 شهراً والتي في جميع أنحاء المنطقة، على الرغم من دورهما المهم في مجلس الأمن.	لقد لحانت الصين وروسيا إلى حد كبير غير قادرين خلال الحملة التي استمرت 02 شهراً والتي تدور في جميع أنحاء المنطقة، على الرغم من دورهما المهم في مجلس الأمن.	لقد لحانت الصين وروسيا إلى حد كبير غير قادرين خلال الحملة التي استمرت 02 شهراً والتي تدور في جميع أنحاء المنطقة، على الرغم من دورهما المهم في مجلس الأمن.
15	While the world watched open-mouthed at the volleys of missiles launched by Israel and Iran at one another during their '12-Day War' in June, another battle was being waged that drew hardly any attention: an Israel-Iran cyber war, waged digitally.	بينما كان العالم يشاهد بذهول وأبيل الصواريخ التي أطلقتها إسرائيل وإيران على بعضهما البعض خلال "حرب الـ 12 يوماً" في يونيو، لحانت هناك معركة أخرى تدور رحاها دون أن تلتفت الأنظار: حرب الإلكترونيات بين إسرائيل وإيران، خاضت رقمياً.	بينما كان العالم يراقب فمًا مغشوح وأبيل الصواريخ التي أطلقتها إسرائيل وإيران على بعضهما البعض خلال "حرب الـ 21 يوماً" في يونيو، لحانت هناك معركة أخرى تدور رحاها ولم تلتفت أي أنباء تقريفاً: حرب الإلكترونيات بين إسرائيل وإيران، تشن رقمياً.	وفي حين كان العالم يراقب بعين مفتوح قصيف الصواريخ الذي أطلقتته إسرائيل وإيران على بعضهما البعض خلال "حرب الـ 21 يوماً" في يونيو، لحانت معركة أخرى تخاصم لم تخطأ إلى باهتمام قلبي: حرب الإلكترونيات بين إسرائيل وإيران، تشن رقمياً.	وفي حين كان العالم يراقب بعين مفتوح قصيف الصواريخ الذي أطلقتته إسرائيل وإيران على بعضهما البعض خلال "حرب الـ 21 يوماً" في يونيو، لحانت معركة أخرى تخاصم لم تخطأ إلى باهتمام قلبي: حرب الإلكترونيات بين إسرائيل وإيران، تشن رقمياً.

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