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Artificial Intelligence in Translating Literary: An Accuracy and Satirical Representation of the Arabic Short Story

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Abstract: The advancement of artificial intelligence (AI) technology has revolutionized translation practices, including the translation of literary texts rich in cultural nuances and stylistic features. This research examines the accuracy and representation of satire in the machine translation of the Arabic short story Juha and the Wooden Donkey by Shaqi Hasan using ChatGPT. The objectives of the research are first, to assess translation accuracy based on Nababan's evaluation theory and second, to identify the types of satire (Horatian, Juvenalian, and Menippean) in the source text and their preservation in the translation. Using a qualitative descriptive approach, data were collected through reading and note-taking techniques on both the source text and its translation, then analyzed using the Miles, Huberman, and Saldana model. Findings reveal that out of 26 excerpts, 22 (88%) were accurate, 2 fairly accurate, and 2 inaccurate. Ten excerpts were identified as Horatian satire, seven as Juvenalian, and eight as Menippean. These results show that while AI can produce structurally and semantically accurate translations, it still struggles with irony, implicit meaning, and cultural depth. This study emphasizes the human translator's role in preserving meaning and aesthetics and urges critical evaluation of AI in literary translation.

INTRODUCTION

Can a machine truly capture the soul of satire, or the beauty of cultural nuance? As artificial intelligence like Chat GPT enters the realm of literary translation, the essence of literature faces an unprecedented test. Along with technological advancements and the growing public interest in global literature, the digitalization of literary texts has rapidly developed and can no longer be ignored. The intersection of information technology and the need for cross-cultural access has led to various innovations in the field of translation, one of which is AI-based machine translation such as Chat GPT.¹ This technology is

¹ Hajer Alaskar, "The Role of Online Learning in Enhancing the Performance of Introverted Female Saudi Students in Translation," *Saudi Journal of Language Studies* 3, no. 3 (January 1, 2023): 158–82, https://doi.org/10.1108/SJLS-12-2022-0092.

capable of translating texts instantly and across multiple languages with ease, providing remarkable convenience for readers and researchers.² This phenomenon not only facilitates cross-linguistic access but also raises new questions about accuracy, depth of meaning, and cultural appropriateness in the resulting translations.³

Advancements in artificial intelligence technology in the field of translation have significantly contributed to expanding access to information across languages and cultures.⁴ Machine translation not only facilitates individuals in understanding foreign texts but also encourages increased interest in reading global literary works.⁵ On one hand, this technology accelerates the translation process and brings readers closer to texts that were previously difficult to access or comprehend. On the other hand, reliance on machines can lead to misinterpretation, contextual errors, and even the loss of aesthetic and cultural values embedded in the text.⁶ This situation highlights that while technology is highly beneficial, it still requires oversight and critical analysis to ensure the accuracy and cultural relevance of translations within their proper social and cultural contexts.

According to Newmark,⁷ translation is the act of transferring the meaning of a text into another language using methods desired by the author. To assess the quality of a translation,⁸ there are several criteria that serve as benchmarks. Newmark states that semantic translation places greater emphasis on fidelity to the source text, while communicative translation focuses on the effect it produces on the target language readers.⁹ In this context, satirical texts are more effectively translated communicatively, as long as the critical and aesthetic meanings inherent in the original are preserved.¹⁰

This view aligns with Nababan's perspective, which states that the quality of a translation can be assessed through three main aspects: accuracy, acceptability,

² Mahendra Gupta, Maitreyee Dutta, and Chandresh Kumar Maurya, *Benchmarking Hindi-to-English Direct Speech-to-Speech Translation with Synthetic Data, Language Resources and Evaluation* (Springer Netherlands, 2025), https://doi.org/10.1007/s10579-025-09827-2.

³ Hassan Saleh Mahdi, "The Use of Web-Based Translation Software in Translating Religious Terms," *Saudi Journal of Language Studies* 2, no. 1 (2022): 28–42, https://doi.org/10.1108/sjls-11-2021-0023.

⁴ Aixiao Zou et al., "Curriculum Pre-Training for Stylized Neural Machine Translation," *Applied Intelligence* 54, no. 17 (2024): 7958–68, https://doi.org/10.1007/s10489-024-05586-9.

⁵ Sudhansu Bala Das et al., "Statistical Machine Translation for Indic Languages," *Natural Language Processing*, 2024, 1–18, https://doi.org/10.1017/nlp.2024.26.

⁶ Fuxue Li et al., "Incorporating Bilingual Translation Templates into Neural Machine Translation," *Scientific Reports* 15, no. 1 (2025): 5547, https://doi.org/10.1038/s41598-025-86754-w.

⁷ Peter Newmark, A Book Of Translation (London: Prentice hall, 1988).

⁸ Peter Newmark, *About Translation* (Clevedon: Multilingual Matters, 1991).

⁹ Kanishk Verma et al., "Leveraging Machine Translation for Cross-Lingual Fine-Grained Cyberbullying Classification amongst Pre-Adolescents," *Natural Language Engineering* 29, no. 6 (2023): 1458–1480, https://doi.org/10.1017/S1351324922000341.

¹⁰ Peter Newmark, Approaches to Translation (Oxford: Pergamon Press, 1981).

and readability.¹¹ Accuracy is considered the most fundamental aspect, as it directly relates to the extent to which the original message's meaning is preserved in the translated text. Inaccurate translations can lead to significant shifts in meaning, especially in texts that contain satire, metaphor, and context-dependent irony.¹²

The use of machine translation tools such as Chat GPT for translating literary texts remains a subject of ongoing debate.¹³ While some parties welcome this technology for its efficiency, others criticize it for its limitations in capturing cultural nuances, irony, and implicit meanings within literary texts.¹⁴ This is due to the tendency of machines to translate literally without taking into account the emotional, social, and aesthetic contexts inherent in literary works.¹⁵ Therefore, human involvement particularly that of translators with strong linguistic and cultural competence is still essential to ensure the accuracy of meaning and the integrity of the message in the target text.¹⁶

The object of this study is the short story جما والحمار الخشبي by Syawqi Hasan, which is rich in social criticism, humour, and satire directed at society. This short story was selected because it features a dense narrative structure filled with satirical elements and a distinctive representation of Arab culture. It has also become a popular reading material among students, yet it has not been widely examined from the combined perspectives of translation and satire. The researcher chose this short story as it is representative of the richness of Arabic literary rhetoric and is well-suited for analysis using the selected theoretical framework.

In analyzing the translation, this study employs the translation accuracy theory developed by Nababan. Nababan's theory provides a concrete framework for evaluating translation quality. The accuracy indicator assesses the degree of

¹¹ Ulfiyatuzzuhriyyah Yatuzzuhriyyah and Evert Haryanto Hilman, "Techniques of Translation of Cultural Words and Its Quality in the Midnight Library Novel," *Jurnal Basis* 9, no. 2 (2022): 269–78, https://doi.org/10.33884/basisupb.v9i2.6238.

¹² Zahra Fontaine-Amjad, "Inclusive Arabic Library Collections: Linguistic Accessibility and Translation Gaps for Non-Major European Languages," *Library Management* 46, no. 3/4 (January 1, 2025): 301–14, https://doi.org/10.1108/LM-01-2025-0004; Muneera Muftah, "Machine vs Human Translation: A New Reality or a Threat to Professional Arabic-English Translators," *PSU Research Review* 8, no. 2 (2022): 484–97, https://doi.org/10.1108/PRR-02-2022-0024.

¹³ Bin Shao et al., "Riboformer: A Deep Learning Framework for Predicting Context-Dependent Translationfile:///D:/IJOSSER-5-10-63-70.Pdf Dynamics," *Nature Communications* 15, no. 1 (2024): 1–10, https://doi.org/10.1038/s41467-024-46241-8.

¹⁴ Gupta, Dutta, and Maurya, *Benchmarking Hindi-to-English Direct Speech-to-Speech Translation with Synthetic Data*; Sri Jomila Oktari, Desi Hariyanti Harahap, and Nur Hasaniyah, "Artificial Intelligence and the Transformation of Arabic Meaning: Challenges and Opportunities," *Abjadia: International Journal of Education* 10, no. 1 (April 2, 2025): 1–18, https://doi.org/10.4018/978-1-7998-5015-1.ch002.

¹⁵ Amel Slim and Ahlem Melouah, "Low Resource Arabic Dialects Transformer Neural Machine Translation Improvement through Incremental Transfer of Shared Linguistic Features," *Arabian Journal for Science and Engineering* 49, no. 9 (2024): 12393–409, https://doi.org/10.1007/s13369-023-08543-9.

¹⁶ Nouhaila Bensalah et al., "Contextualized Dynamic Meta Embeddings Based on Gated CNNs and Self-Attention for Arabic Machine Translation," *International Journal of Intelligent Computing and Cybernetics* 17, no. 3 (January 1, 2024): 605–31, https://doi.org/10.1108/IJICC-03-2024-0106.

meaning equivalence between the source and target texts. The strength of this theory lies in its broad applicability, although it has limitations particularly in capturing stylistic nuances and implicit meanings that are typical in satirical texts. Nababan explains that translation quality can be measured through three main aspects: (1) accuracy, or the degree of meaning equivalence; (2) acceptability, or conformity to the norms of the target language; and (3) readability, or the ease of understanding.¹⁷ This study focuses primarily on the aspect of accuracy, using a rating scale of 1 (inaccurate), 2 (moderately accurate), and 3 (accurate).

Studies on translation accuracy in Arabic literary texts have been widely conducted, particularly in examining how the original meaning can be preserved in the translated version¹⁸. However, there has been little research that simultaneously explores both translation accuracy and satire. Several studies have shown that machine translation powered by artificial intelligence still faces significant challenges in capturing the aesthetic nuances and cultural context of the original text. For example, Tosun investigates the ability of Turkish–English bilingual speakers to assess the accuracy of machine translations and their preferences for using them in various contexts.¹⁹ Maulida and Saragih examine the accuracy and acceptability of subtitles in the Netflix series *Alice in Borderland*, using Nababan's translation quality theory.²⁰ Meanwhile, El Idrysy et al. provide a comprehensive review of Arabic machine translation (Arabic MT),²¹ as well as the development and methods of neural machine translation (NMT) in translating between Arabic and English.

On the other hand, studies on satire emphasize the importance of social criticism and subtle rhetoric in exposing collective ignorance or irrational value systems. For instance, research by Ayuningtyas and Triyono analyzed the satirical language style of Bu Tejo in the short film *Tilik*, focusing on the use of cynicism, irony, and sarcasm to convey social critique.²² Boukes et al. examine how satirical videos encourage more user engagement on social media compared to regular or

¹⁷ M. Rudolf Nababan, Teori Menerjemah Bahasa Inggris (Yogyakarta: Pustaka Pelajar, 1999).

¹⁸ Muhamad Raihan, Nur Hizbullah, and Sayyed Zuhdi Abdil Ghany, "Deictic Dimensions in Translation: Analysis of Personal Deixis in the Indonesian and Arabic Versions of Blue Lock Comics," *International Journal of Arabic Language Teaching (IJALT)* 7, no. 01 (January 15, 2025): 73–90, https://doi.org/10.32332/ijalt.v7i01.9913.

¹⁹ Sümeyra Tosun, "Machine Translation: Turkish–English Bilingual Speakers' Accuracy Detection of Evidentiality and Preference of MT," *Cognitive Research: Principles and Implications* 9, no. 1 (2024), https://doi.org/10.1186/s41235-024-00535-z.

²⁰ Teges Maulida and Febi Ariani Saragih, "Analisis Kualitas Terjemahan Subtitle Serial Netflix Alice in Borderland," *Mezurashii* 5, no. 1 (2023): 51–60, https://doi.org/10.30996/mezurashii.v5i1.8420.

²¹ Fatima Zahra El Idrysy et al., "Unlocking the Language Barrier: A Journey through Arabic Machine Translation," *Multimedia Tools and Applications* 84, no. 14 (2025): 14071–104, https://doi.org/10.1007/s11042-024-19551-8.

²² Nawang Asri Ayuningtyas and Sulis Triyono, "Satire Language Style By Bu Tejo in the Short Film 'Tilik,'" LiNGUA: Jurnal Ilmu Bahasa Dan Sastra 16, no. 2 (January 6, 2022): 261–70, https://doi.org/10.18860/ling.v16i2.11355.

partisan news, even though they generate less controversy.²³ Furthermore, Möller and Boukes discuss the impact of user comments on entertainment experience and viewer comprehension when watching political satire on online platforms.²⁴ Finally, Demina explores the use of linguistic and stylistic devices in constructing socio-political satire in modern American animated series.²⁵

This study shares several similarities and differences with previous research. The similarity lies in the theoretical framework used. However, the differences are found in the research object and its objectives. Based on these similarities and differences, the novelty of this study lies in its contribution as a new approach that has not been explored in earlier research. The innovative aspect is the combination of two approaches that have not previously been examined together: an analysis of translation accuracy based on Nababan's theory and the identification of satire types in Arabic short stories using the classifications of Horatian, Juvenalian, and Menippean satire. Unlike prior studies that focused solely on one aspect, this research offers a new contribution by analyzing the extent to which machine translation technology can preserve the satirical meaning in literary texts.

The objectives of this study are to examine the level of translation accuracy achieved by using Chat GPT in the short story بعاد الخشبي based on Nababan's translation evaluation theory, and to identify the types of satire present in the text and to assess the extent to which the satirical messages are preserved in the translation. This research is expected to contribute new insights to the field of literary translation studies, particularly in evaluating how well artificial intelligence can retain satirical nuances in Arabic literary texts. Additionally, it offers a fresh perspective on the importance of accuracy and cultural sensitivity in the translation process, and how translation strategies can influence the delivery of social criticism conveyed through Horatian, Juvenalian, or Menippean satire.

METHOD

This study employs a qualitative method,²⁶ focusing on the analysis of meaning and interpretation of machine translation results as well as the satirical content within literary works. Such aspects cannot be measured numerically but

²³ Mark Boukes et al., "Comparing User-Content Interactivity and Audience Diversity across News and Satire: Differences in Online Engagement between Satire, Regular News and Partisan News," *Journal of Information Technology & Politics* 19, no. 1 (January 2, 2022): 98–117, https://doi.org/10.1080/19331681.2021.1927928.

²⁴ Anne Marthe Möller and Mark Boukes, "Online Social Environments and Their Impact on Video Viewers: The Effects of User Comments on Entertainment Experiences and Knowledge Gain during Political Satire Consumption," *New Media & Society* 25, no. 5 (May 3, 2023): 999–1022, https://doi.org/10.1177/14614448211015984.

²⁵ Olga V. Demina, "Linguistic and Stylistic Means of Satire Construction in the Animated Series1," *RUDN Journal of Language Studies, Semiotics and Semantics* 12, no. 4 (2021): 1124–46, https://doi.org/10.22363/2313-2299-2021-12-4-1124-1146.

²⁶ John W Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 2nd ed. (California: Sage Publications, InC, 2007).

must be understood through the context of language, culture, and the surrounding social functions. The type of research used is descriptive qualitative. Descriptive research is applied to systematically describe and analyze linguistic and literary phenomena through an in-depth interpretation of the available data. The data sources in this study consist of both primary and secondary sources. The primary data source includes the short story titled primary data source includes the short story titled by Syawqi Ḥasan in its original Arabic version and its machine-translated version in Indonesian, produced by GPT (Generative Pre-trained Transformer). The secondary sources comprise Nababan's translation accuracy scale, literature on satire in literature, and relevant articles or scholarly journals related to machine translation and social criticism in literary texts.

The data collection technique was carried out through reading and note-taking by closely examining the original Arabic text of the short story and its machine-translated version. Each sentence or significant segment of the translated story was analyzed using Nababan's accuracy scale and classified based on the types of satire using the theories of Horatian, Juvenalian, and Menippean satire. The analysis was also supported by the review of relevant theoretical literature to strengthen the analysis and arguments. The data analysis was conducted using the model developed by Miles, Huberman, and Saldaña,²⁷ which consists of four main stages: data collection, data condensation, data display, and conclusion drawing and verification.

RESULT AND DISCUSSION

In translation studies, accuracy is one of the key indicators used to assess the quality of a translation. According to Nababan, accuracy refers to the extent to which the meaning of the source text is fully transferred into the target text without any distortion of meaning. Accuracy is defined as "the degree of equivalence of meaning between the source text and the target text." This means that an accurate translation is one that successfully conveys the entire meaning contained in the source text completely, without omission, addition, or distortion of meaning. Meanwhile, satire is a literary style that uses irony or sarcasm to convey criticism of social, political, or human behavioural phenomena. Classical satire theory is generally divided into three main types, as explained by Northrop Frye²⁹ and further developed by Abrams.³⁰

The first type, Horatian satire, is light-hearted, humorous, and rich in irony, typically used to gently mock human flaws in a sympathetic and witty manner.

²⁷ Matthew B Miles, A Michael Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. (United States of Amerika: Sage Publications, Inc., 2014).

²⁸ Nababan, Teori Menerjemah Bahasa Inggris.

²⁹ Northrop Frye, Anatomy of Criticism: Four Essays (Princeton: Princeton University Press, 1957).

³⁰ M H Abrams, A Glossary of Literary Terms, ed. 7 (Boston: Heinle & Heinle, 1999).

The second, Juvenalian satire, is sharper, harsher, and tends to directly attack public injustice or foolishness with a tone that is angry or bitter. The third, Menippean satire, is more philosophical and conceptual, targeting irrational ideas, values, or ways of thinking through the use of paradox, absurdity, and logical play.³¹

Translation Accuracy of Short Story Using ChatGPT

Table 1. Translation Accuracy Scores and Types of Satire

No.	Arabic Text	Indonesian Translation	Accuracy Score	Type of Satire
1.	قال جحا: "لو كان الحمار الخشبي حقيقياً، لركبته إلى السوق"!	Juha berkata: "Kalau saja keledai kayu ini sungguhan, pasti sudah aku naiki ke pasar!"	3	Horatian
2.	الناس يصدقون أي شيء، حتى لو كان الحمار من خشب!	Orang-orang mempercayai apa saja, bahkan jika keledainya dari kayu!	2	Juvenalian
3.	جحا صنع الحمار ليُخدع الأغبياء	Juha membuat keledai itu untuk menipu orang bodoh.	3	Menippean
4.	قال جحا: "الناس يحبون الأوهام أكثر من الحقيقة"!	Juha berkata: "Orang- orang lebih suka ilusi daripada kebenaran!"	3	Menippean
5.	قال جحا : "العقل نعمة، لكن لا أحد يستخدمه"!	Juha berkata: "Akal itu anugerah, tapi tak ada yang menggunakannya!"	3	Menippean
6.	بدأ الأطفال يغنون للحمار الخشبي	Anak-anak mulai menyanyikan lagu untuk keledai kayu.	3	Horatian
7.	الحمار لا يرد، لكنهم يظنون أنه يسمعهم	Keledai itu tidak merespons, tapi mereka pikir dia mendengar.	3	Juvenalian
8.	جحا جلس يعد النقود ويضحك	Juha duduk menghitung uang sambil tertawa.	3	Horatian
9.	بدأ الناس يبيعون ممتلكاتهم ليركبوا الحمار	Orang-orang mulai menjual barang-barang mereka untuk menaiki keledai.	3	Juvenalian
10.	لم يفكر أحد في أصل الحمار	Tak ada yang memikirkan asal-usul keledai itu.	3	Menippean
11.	الحمار الخشبي صار أسطورة	Keledai kayu itu menjadi legenda.	3	Horation

³¹ Arlinda Arlinda and Irwan Baadilla, "The Use of Satire Language Style in Dakwah Videos and Its Implications For the Learning of Indonesian Language at School," *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme* 5, no. 3 (October 16, 2023): 737–62, https://doi.org/10.37680/scaffolding.v5i3.3451.

12.	كانت هناك امرأة تبكي لأن الحمار لم يتكلم معها	Ada seorang wanita menangis karena keledai tidak berbicara padanya.	3	Horatian
13.	جحا قال: "سأصنع جملاً خشبياً بعد هذا"!	Juha berkata: "Setelah ini, aku akan membuat unta kayu!"	3	Horatian
14.	الأطفال يسألون الحمار عن أحلامهم	Anak- anak bertanya pada keledai tentang mimpi mereka.	3	Horatian
15.	الحمار صار ضريحاً يزوره الناس	Keledai itu menjadi tempat ziarah yang dikunjungi orang	3	Menippean
16.	الناس قالوا: "الحمار لا يتكلم لأنه حكيم"!	Refedal tidak bicara	3	Horatian
17.	الناس يأكلون طعاماً باركه الحمار	Orang-orang memakan makanan yang diberkati oleh keledai.	1	Menippean
18.	الحمار أعطى الناس أسرار الكون	Keledai memberikan rahasia alam semesta kepada orang-orang.	1	Menippean
19.	الناس قالوا: "لا نحتاج العلماء، لدينا الحمار"!	Orang-orang berkata: "Kita tidak butuh ilmuwan, kita punya keledai!"	3	Juvenalian
20.	قال جحا: "الحمار يفهمكم أكثر من أنفسكم"!	Juha berkata: "Keledai memahami kalian lebih baik daripada kalian sendiri!"	3	Horatian
21	"هذا الحمار لا يأكل، ولا يشرب، ولا يتحرك"!	"Keledai ini tidak makan, tidak minum, dan tidak bergerak!"	3	Horatian
22.	قال رجل: "اشتريت الحمار لأنه يبدو حقيقياً"!	Seorang pria berkata: "Aku membeli keledai itu karena terlihat nyata!"	3	Juvenalian
23.	أحدهم قال: "الحمار علمني الحكمة"!	Seseorang berkata: "Keledai mengajariku kebijaksanaan!"	2	Horatian
24.	ظهر أن الحمار الخشبي مجرد لعبة قديمة	Ternyata keledai kayu hanyalah mainan tua.	3	Juvenalian
25.	جحا أصبح غنياً من الحمار الخشبي	Satire tajam terhadap penipuan kolektif.	3	Juvenalian
26.	الحمار الخشبي صار مزاراً سياحياً	Keledai kayu menjadi objek wisata	3	Horatian

Based on the table above, 26 data points were analyzed in terms of translation accuracy and types of satire. There were 22 accurate translations, 2 less accurate ones, and 2 inaccurate ones. Below, the researcher will explain 7 selected data points from the table.

This .قال جحا: "لو كان الحمار الخشبي حقيقياً، لركبته إلى السوق! First data point, the excerpt translation is categorized as accurate because it successfully preserves the original meaning from the source language without distortion or omission of information. The sentence structure in Arabic uses a conditional irrealis form, "لو...كان", which expresses an unreal condition or wishful thinking. In Indonesian, this structure is best translated as "kalau saja... pasti...", an expression used to indicate hypothetical or impossible scenarios. The translator chose the correct and idiomatic equivalent in the target language, ensuring the main idea of the original sentence remains intact. Furthermore, the word choices follow proper grammar and spelling conventions. The phrase "keledai kayu" accurately renders "الحمار الخشبي", without any semantic shift. The word "sungguhan" ("real") is also appropriately used to contrast something fake or artificial. The translated phrase "pasti sudah aku naiki ke pasar" reflects the speaker's imagination of an impossible action, expressed with a tone of light regret. Overall, this translation is not only semantically accurate, but also natural, clear, and understandable to Indonesian readers without needing to refer to the original text. As stated by Nababan,³² an accurate translation is one that conveys the meaning of the source language into the target language precisely and completely.

Second data point, the excerpt الناس يصدقون أي شيء، حق لو كان الحمار من خشب! This translation is considered moderately accurate because the main message of the Arabic sentence has been conveyed into Indonesian. The sentence criticizes how easily people believe in things without questioning their truth. While the translation is grammatically correct and semantically acceptable, the phrase "كان الحمار من خشب حق لو " was translated literally as "bahkan jika keledainya dari kayu". In Indonesian, this sounds a bit flat and lacks the rhetorical or idiomatic impact of the original Arabic. Although the core meaning people are easily deceived is still communicated, the translation doesn't fully capture the strength of sarcasm or hyperbole intended in the source text. In Arabic, the phrase "wooden donkey" may carry idiomatic meaning, implying something absurd or illogical to believe in. A more idiomatic Indonesian translation might be: "bahkan jika itu hanya mainan keledai dari kayu" or "meski jelas-jelas keledainya tidak nyata". With such improvement, the tone of irony and disbelief would be more effectively conveyed. According to Nababan's theory, a moderately accurate translation occurs when

³² Nababan, Teori Menerjemah Bahasa Inggris.

only part of the meaning is conveyed accurately, while important elements are not translated properly due to poor word choice or loss of rhetorical and cultural effects such as irony and metaphor.

Third data point, the excerpt! قال جعا: "العقل نعمة، لكن لا أحد يستخدمه! This translation is highly accurate because it successfully preserves both the explicit and implicit meanings of the original text. The phrase "العقل نعمة" means that the mind or intellect is a blessing from God, and this was accurately translated into Indonesian as "Akal itu anugerah". This is a positive general statement. However, it is immediately followed by a contrasting clause "الكن لا أحد يستخدمه" which means "but no one uses it". This too is translated correctly as "tapi tak ada yang menggunakannya", preserving both structure and meaning. In terms of grammar and readability, the translated sentence meets Indonesian language standards. There are no awkward sentence structures, and the word choices align with the original meaning. Furthermore, semantic accuracy is maintained without omitting, adding, or misinterpreting the intended message. The sentence stands well on its own and can be understood without additional context. According to Nababan, this represents an ideal level of translation accuracy, as both semantic and pragmatic aspects are conveyed fully and without ambiguity.

Fourth data point, the excerpt جالس يعد النقود ويضحك. This translation is also highly accurate as all the information in the source sentence is fully transferred into Indonesian. The sentence conveys three key elements: the subject (Juha), the activity (counting money), and the expression (laughing). The phrase "set little as "duduk menghitung uang", which semantically expresses both the posture and the action of the subject. The final phrase "giantly meaning "and he laughed" is translated as "sambil tertawa", which structurally shows the two actions are happening simultaneously. Syntactically, the Indonesian sentence is well formed, without any shift or overlap in meaning. The word choices "duduk", "menghitung", "uang", and "tertawa" are all standard vocabulary. The sentence is concise, meaningful, and expressive. The translator has not only preserved the meaning, but also successfully conveyed the atmosphere without needing to explicitly describe it. According to Nababan's theory, this is an example of an ideal translation, where the message is transferred from the source to the target language naturally, fully, and without causing confusion.

Fifth data point, the excerpt قال أحدهم: "الحمار علمني الحكمة! This translation is fairly accurate because it transfers the surface meaning of the Arabic sentence "الحكمة correctly into English. It includes the speaker, the subject (the donkey), and the claim of gaining wisdom. However, it does not fully capture the satirical and ironic tone intended in the original. In context, the statement is meant to mock the

irrational admiration of the donkey, which symbolizes foolishness. The phrase should carry a tone of irony, but the literal translation fails to highlight this absurdity. Based on Nababan's theory, this is categorized as *fairly accurate* because the main message is conveyed but the deeper rhetorical effect and implicit meaning are not fully preserved.³³

Sixth data point, the excerpt الحمار أعطى الناس أسرار الكون . This translation is not accurate as it renders the Arabic sentence "أعطى الناس أسرار الكون" too literally and misses its satirical nature. In the story's context, the phrase is an example of hyperbole meant to expose the irrationality of idolizing a wooden donkey. The English version sounds serious and mythical, lacking the intended absurdity and irony. There is a significant shift in meaning, where the satire becomes an exaggerated spiritual claim. According to Nababan's theory, this translation is *not accurate* because it distorts the intended message and fails to deliver the implied criticism embedded in the original.

Seventh data point, the excerpt ظهر أن الحسار الحشيي مجود لعبة قديمة. This translation is also rated as highly accurate, as the meaning of the Arabic sentence has been completely and clearly transferred into Indonesian. The phrase "ظهر أن" meaning "it turned out that" suggests new information being revealed after previously being unknown. This is translated precisely as "ternyata", which functions the same in Indonesian to express surprise or a change in understanding. The phrase "الحشي is translated literally as "keledai kayu", maintaining the focus of the sentence. Lastly, "مجرد لعبة قديمة" which means "just an old toy" is translated well into "hanyalah mainan tua". The word "hanyalah" emphasizes that the object is of no special value. Both the denotative and connotative meanings are preserved. Structurally, the sentence follows proper Indonesian syntax, and no grammatical errors are found. Therefore, based on Nababan's accuracy criteria, this translation effectively conveys the intended meaning completely and accurately.³⁴

The findings of this study reveal that although the classical satire theory proposed by Abrams and Frye provides a clear framework of categorization—namely Horatian, Juvenalian, and Menippean—the application of these categories in the context of machine translation presents distinct challenges, particularly in preserving irony, satire, and the cultural context embedded in the original text. Previous studies, such as those by Demina³⁵ and Ayuningtyas & Triyono³⁶, have demonstrated that the success of satire translation heavily depends on sensitivity

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³³ Nababan.

³⁵ Demina, "Linguistic and Stylistic Means of Satire Construction in the Animated Series1."

³⁶ Ayuningtyas and Triyono, "Satire Language Style By Bu Tejo in the Short Film 'Tilik."

to implicit meaning and the sociocultural background of the text elements that machine translators have yet to fully grasp.

In this context, the present study not only examines the extent to which artificial intelligence tools like ChatGPT can produce semantically accurate translations but also explores how well satirical elements are preserved in the translation process, using an Arabic folk story rich in social criticism and a dual-theoretical evaluative approach. This integrated approach constitutes a novel contribution to the field of Arabic literary translation studies, as it combines Nababan's accuracy assessment framework with classical satire classification into a single analytical model that addresses both linguistic and rhetorical aspects of the literary text.

Representation of Satire in the Short Story Juha and the Wooden Donkey

According to Abrams in A Glossary of Literary Terms, satire cannot be separated from the social and cultural context in which a text is produced.³⁷ Therefore, in translating satire, a translator must not only understand the linguistic structure but also the ideological and historical background of the source text. For instance, Juvenalian satire, which is harsh and biting, requires a high level of sensitivity so that its critical tone is preserved without becoming overly offensive in the target culture. Frye, in Anatomy of Criticism, adds that the form of satire often works by disrupting logical boundaries through irony and hyperbole, which demands extra creativity from the translator to transfer such absurdity without losing meaning.³⁸ Thus, a strong grasp of the theory of satire genres and translation techniques is an essential foundation for translators aiming to maintain both accuracy and aesthetic effect. Based on the theories of Northrop Frye and M.H. Abrams, classical satire is divided into three types: Horatian, Juvenalian, and Menippean.

Horatian satire derives from the Roman poet Horace, and is a form of satire that is light, humorous, and subtle. This form emphasizes gentle ridicule of human folly or weakness, with a sympathetic and mild tone. The main purpose of Horatian satire is not to harshly criticize, but to entertain while encouraging readers to reflect on the absurdities or ironies of everyday life. This style is often found in social essays or stories that contain light social criticism. According to Abrams, Horatian satire functions as a mirror that offers a reflection of social life in an ironic yet non-hurtful manner. ³⁹ In translation, this form requires sensitivity to irony and careful diction to preserve the humour without becoming crude or offensive in the target culture.

³⁷ Abrams, *A Glossary of Literary Terms*.

³⁸ Frye, Anatomy of Criticism: Four Essays.

³⁹ Abrams, A Glossary of Literary Terms.

Juvenalian satire originates from the works of Juvenal, a Roman poet known for his sharper and more severe tone than Horace. This form is more aggressive and often conveyed with anger, bitterness, or condemnation. Its aim is not merely to entertain but to directly attack injustice, hypocrisy, or sociopolitical corruption. Juvenalian satire is frequently used in sharp critiques of institutions, governments, or immoral social practices. Northrop Frye states that this type of satire has a polemical character aimed at emotionally shaking the reader. In translation, Juvenalian satire requires the translator to preserve the strong tone and critical stance of the source text while adapting it to the target culture, so it does not become excessively offensive or lose its rhetorical force.

Menippean satire has its roots in Menippus, an ancient Greek philosopher who conveyed his critiques through narrative and philosophical forms.⁴² This form differs from the previous two in that it is more intellectual and conceptual, targeting irrational ideas or ways of thinking rather than individuals or institutions. A hallmark of Menippean satire is the use of absurdity, paradoxes, logical play, and a mixture of high and low styles simultaneously.⁴³ Abrams emphasizes that this form is often delivered through non-linear structure or complex narrative, reflecting the intricate ideas it critiques.⁴⁴ In translation, Menippean satire presents a significant challenge due to its intertextual references, symbolism, and discourse play, which require deep understanding of the source text's philosophy and culture.

The researcher identified a total of 26 instances of satire in the short story. However, this article discusses only six selected examples, chosen to represent each type of classical satire Horatian, Juvenalian, and Menippean. This selection was made to maintain a focused and in-depth analysis while avoiding an overly lengthy and repetitive discussion. Moreover, these five examples are considered the most representative in terms of style, function, and context, thus providing a sufficient overview of how satire tends to be translated by machine translation tools without compromising the quality. Below, the researcher will present the analysis results of six satire data samples. The discussions are as follows.

⁴⁰ Frye, Anatomy of Criticism: Four Essays.

⁴¹ Tamim Mulloh, Ade Astri Deviana, and Muhammad Ridho Naufal, "Satire: Sindiran Humor Dalam Naskah Drama Arab," *Mantiqu Tayr: Journal of Arabic Language* 4, no. 1 (December 6, 2023): 21–36, https://doi.org/10.25217/mantiqutayr.v4i1.4000.

⁴² Agus Mulyanto, Andarini Rani Probowati, and Ratih Purnamasari, "Analisis Gaya Bahasa Sindiran Dalam Video Tiktok Rian Fahardhi," *Semantik* 12, no. 2 (2023): 141–60, https://doi.org/10.22460/semantik.v12i2.p141-160.

⁴³ Dita Chrysan Theum and Candra Rahma Wijaya Putra, "Resepsi Satire Dunia Politik Dalam Novel Sabdo Cinta Angon Kasih Karya Sujiwo Tejo," *Madah: Jurnal Bahasa Dan Sastra* 12, no. 2 (2021): 171–83, https://doi.org/10.31503/madah.v12i2.371.

⁴⁴ Abrams, A Glossary of Literary Terms.

Table.2 Types of Satire

No.	Arabic Text	Type of Satire
1.	قال جحا: "لو كان الحمار الخشبي حقيقياً، لركبته إلى السوق	Horatian
2.	الناس يصدقون أي شيء، حتى لو كان الحمار من خشب!	Juvenalian
3.	قال جحا: "العقل نعمة، لكن لا أحد يستخدمه"!	Menippean
4.	جلس جحا يعد النقود ويضحك	Horatian
5.	ظهر أن الحمار الخشبي مجرد لعبة قديمة	Juvenalian
6.	لم يفكر أحد في أصل الحمار	Menippean

First data, the excerpt قال جعا: "لو كان الحمار الخشبي حقيقياً، لركبته إلى السوق This excerpt reflects Horatian satire, which is light, humorous, and non-offensive. Juha expresses a silly wish, humorously suggesting that he wishes the wooden donkey a clearly inanimate object was real so he could ride it to the market. This satire does not target any particular individual or institution but rather highlights the human tendency to fantasize without considering reality. In this context, Juha gently mocks unrealistic attitudes often found in daily life: hoping for the impossible. The use of Horatian satire here is effective because it avoids resistance and instead invites readers to smile and think. The quote serves as a soft critique of the habit of hoping for unrealistic things, subtly teaching the value of logic and awareness.

Second data, !الناس يصدقون أي شيء، حتى لو كان الحمار من خشب! This excerpt is an example of Juvenalian satire, known for its sharp, harsh tone and anger toward its object of critique. Juha bitterly criticizes a society that is easily deceived—even by something as absurd as a wooden donkey. The tone is no longer light or funny, but loaded with deep social criticism. Juha seems frustrated with a collective mentality that is uncritical and easily manipulated a reflection very relevant to modern societies vulnerable to hoaxes, propaganda, and misinformation. In the tradition of Juvenalian satire, as explained by Juvenal, the criticism is directed at the moral decay of society and demands a direct and confrontational response. The satire here exposes the danger of collective ignorance. This could be read as a commentary on various forms of social deception that succeed because people blindly believe without verification. It serves as a harsh slap to a culture that glorifies unverified information and, more broadly, to educational and social systems that fail to foster critical thinking.

This excerpt represents قال جحا: "العقل نعمة، لكن لا أحد يستخدمه! . This excerpt represents Menippean satire, which targets irrational ways of thinking rather than specific actions or individuals. The statement is a critique of a society that has intellectual potential but chooses to ignore it. In Menippean style, as explained by Northrop

Frye, the satire attacks irrational or ridiculous mindsets through a philosophical and often paradoxical approach. Juha does not point to anyone specifically but delivers a shocking generalization: that reason, although a gift, is not used. This is a critique of anti-intellectual culture a culture that prioritizes shallow opinions, superstitions, or emotional impulses over critical and logical thinking. This satire is highly relevant in today's world, where access to knowledge is vast, yet misinformation and shallow thinking remain prevalent. Juha expresses concern about this phenomenon, not with rage but with sharp and reflective irony.

Fourth data, جلس جحا يعد النقود ويضحك. This excerpt demonstrates Horatian satire, which is light and entertaining. Juha is portrayed sitting, counting money and laughing, suggesting he might have obtained it through clever or perhaps cunning means. However, instead of sharply criticizing him, this quote highlights the humorous side of Juha's cleverness. In Horatian satire, deviant behaviour is laughed at not to be condemned, but to encourage subtle awareness. Juha is not depicted as a dangerous trickster but rather as a smart character who knows how to take advantage of a situation. This aligns with the essence of Horatian satire: improving morality with a smile, not anger. The satire here seems to suggest that cleverness is often not rewarded fairly but becomes a survival tool. Juha, representing the common people, laughs at a system that may be unjust by taking small advantages from it. His laughter while counting money is a symbolic victory over a world that often oppresses the simple. This satire does not punish cunningness but uplifts it as a legitimate form of resistance.

Fifth data, the excerpt state with library attacks ignorance and deceit within society. The wooden donkey, initially perceived as potentially useful, is ultimately revealed to be just an old toy. The stark contrast between expectation and reality is the driving force behind this satire. Juha not only exposes the truth but also highlights how easily society is swayed by illusions. This Juvenalian satire reflects disappointment and anger toward collective ignorance and possible deliberate deception. In a social context, this quote symbolizes false hopes intentionally created and sold to the public. It can be interpreted as a critique of various forms of social manipulation, such as empty political promises, fake products, or fabricated news designed to appear convincing. Juha, with his clever and reflective tone, opens society's eyes to the fact that what they valued was merely an illusion. The bitter humour cloaked in harsh reality reflects satire as a tool of resistance against systemic lies.

Sixth data, the excerpt الم يفكر أحد في أصل الحمار. This excerpt uses a universal negative structure, emphasizing the complete absence of critical thinking. The word "أصل" (origin) shifts the focus from the donkey itself to society's ignorance of

the truth behind what they believe in. This sentence creates a contrast between illusion and reality—people are mesmerized by the wooden donkey as a symbol yet fail to question its source or meaning. This is where the Menippean satire operates: it does not target individuals, but exposes irrational, passive, and unreflective modes of thinking. The satire invites readers to recognize that the failure to think critically is the root of social manipulation, public deception, and the worship of myths built on no rational foundation.

The findings of this study indicate that machine translation tools such as Chat GPT tend to succeed in conveying denotative meaning, but remain weak in capturing irony, subtle humour, and contextual satire that are characteristic of the genre. This aligns with Demina's study,⁴⁵ which states that translating satire requires stylistic sensitivity and contextual understanding—elements often missed by machines. Unlike the study by Maulida and Saragih,⁴⁶ which only assessed accuracy based on formal linguistic aspects without considering rhetorical effects, this research emphasizes the importance of preserving the critical and aesthetic values inherent in satire. Furthermore, the study by Ayuningtyas and Triyono⁴⁷ on satirical language style in the short film *Tilik* highlights that the effectiveness of satire relies on implicit and socio-cultural understanding, which remains a challenge in machine translation. Therefore, this study offers a novel approach by integrating two forms of analysis, Nababan's translation accuracy theory and the classical satire classification, resulting in a more in-depth evaluation of AI-based Arabic literary translation.

CONCLUSION

This study highlights the capability of artificial intelligence, particularly ChatGPT, in translating Arabic literary texts by combining Nababan's translation accuracy theory with classical satire classifications Horatian, Juvenalian, and Menippean. Out of 26 data points, 88% were categorized as accurate, indicating that AI can produce structurally and semantically acceptable translations. However, in terms of aesthetic quality, irony, and implicit cultural meaning especially within satirical content, AI still faces considerable challenges. These findings affirm that human translators remain essential to preserve the rhetorical depth and cultural context of literary works.

Although this study contributes valuable insights, it is limited to one short story within a specific genre and does not fully assess readability or cultural acceptability. Future studies should explore a broader range of literary texts, involve target audiences in the evaluation process, and compare outputs across

⁴⁵ Demina, "Linguistic and Stylistic Means of Satire Construction in the Animated Series1."

 $^{^{46}}$ Maulida and Saragih, "Analisis Kualitas Terjemahan Subtitle Serial Netflix Alice in Borderland."

⁴⁷ Ayuningtyas and Triyono, "Satire Language Style By Bu Tejo in the Short Film 'Tilik.'"

different AI platforms. This research contends that the effectiveness of machine translation in literary contexts should not be assessed solely by linguistic accuracy, but also by its ability to retain rhetorical style, cultural nuance, and critical tone. By integrating translation accuracy and satire classification, this study proposes a more holistic evaluative framework that better reflects the layered meaning of literature. In an era dominated by AI-assisted translation, such an approach balances speed and accessibility with interpretive depth and cultural sensitivity, reaffirming that human expertise remains irreplaceable in preserving the artistic and ideological integrity of literary texts.

References

- Abrams, M. H. A Glossary of Literary Terms. Edited by 7. Boston: Heinle & Heinle, 1999.
- Alaskar, Hajer. "The Role of Online Learning in Enhancing the Performance of Introverted Female Saudi Students in Translation." *Saudi Journal of Language Studies* 3, no. 3 (January 1, 2023): 158–82. https://doi.org/10.1108/SJLS-12-2022-0092.
- Arlinda, Arlinda, and Irwan Baadilla. "The Use of Satire Language Style in Dakwah Videos and Its Implications For the Learning of Indonesian Language at School." *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme* 5, no. 3 (October 16, 2023): 737–62. https://doi.org/10.37680/scaffolding.v5i3.3451.
- Ayuningtyas, Nawang Asri, and Sulis Triyono. "Satire Language Style By Bu Tejo in the Short Film 'Tilik.'" *LiNGUA: Jurnal Ilmu Bahasa Dan Sastra* 16, no. 2 (January 6, 2022): 261–70. https://doi.org/10.18860/ling.v16i2.11355.
- Bensalah, Nouhaila, Habib Ayad, Abdellah Adib, and Abdelhamid Ibn El Farouk. "Contextualized Dynamic Meta Embeddings Based on Gated CNNs and Self-Attention for Arabic Machine Translation." International Journal of Intelligent Computing and Cybernetics 17, no. 3 (January 1, 2024): 605–31. https://doi.org/10.1108/IJICC-03-2024-0106.
- Boukes, Mark, Xiaotong Chu, M. F. Abdulqadir Noon, Rufei Liu, Theo Araujo, and Anne C. Kroon. "Comparing User-Content Interactivity and Audience Diversity across News and Satire: Differences in Online Engagement between Satire, Regular News and Partisan News." *Journal of Information Technology & Politics* 19, no. 1 (January 2, 2022): 98–117. https://doi.org/10.1080/19331681.2021.1927928.
- Creswell, John W. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 2nd ed. California: Sage Publications, InC, 2007.
- Das, Sudhansu Bala, Divyajyoti Panda, Tapas Kumar Mishra, and Bidyut Kr. Patra. "Statistical Machine Translation for Indic Languages." *Natural Language Processing*, 2024, 1–18. https://doi.org/10.1017/nlp.2024.26.
- Demina, Olga V. "Linguistic and Stylistic Means of Satire Construction in the Animated Series1." *RUDN Journal of Language Studies, Semiotics and Semantics* 12, no. 4 (2021): 1124–46. https://doi.org/10.22363/2313-2299-2021-12-4-1124-1146.
- Fontaine-Amjad, Zahra. "Inclusive Arabic Library Collections: Linguistic Accessibility and Translation Gaps for Non-Major European Languages." *Library Management* 46, no. 3/4 (January 1, 2025): 301–14. https://doi.org/10.1108/LM-01-2025-0004.

- Frye, Northrop. *Anatomy of Criticism: Four Essays*. Princeton: Princeton University Press, 1957.
- Gupta, Mahendra, Maitreyee Dutta, and Chandresh Kumar Maurya. *Benchmarking Hindito-English Direct Speech-to-Speech Translation with Synthetic Data. Language Resources and Evaluation*. Springer Netherlands, 2025. https://doi.org/10.1007/s10579-025-09827-2.
- Idrysy, Fatima Zahra El, Soufiane Hourri, Ikram El Miqdadi, Assia Hayati, Yassine Namir, Bassma Ncir, and Jamal Kharroubi. "Unlocking the Language Barrier: A Journey through Arabic Machine Translation." *Multimedia Tools and Applications* 84, no. 14 (2025): 14071–104. https://doi.org/10.1007/s11042-024-19551-8.
- Li, Fuxue, Beibei Liu, Hong Yan, Peijun Xie, Jiarui Li, and Zhen Zhang. "Incorporating Bilingual Translation Templates into Neural Machine Translation." *Scientific Reports* 15, no. 1 (2025): 5547. https://doi.org/10.1038/s41598-025-86754-w.
- Mahdi, Hassan Saleh. "The Use of Web-Based Translation Software in Translating Religious Terms." *Saudi Journal of Language Studies* 2, no. 1 (2022): 28–42. https://doi.org/10.1108/sjls-11-2021-0023.
- Maulida, Teges, and Febi Ariani Saragih. "Analisis Kualitas Terjemahan Subtitle Serial Netflix Alice in Borderland." *Mezurashii* 5, no. 1 (2023): 51–60. https://doi.org/10.30996/mezurashii.v5i1.8420.
- Miles, Matthew B, A Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. United States of Amerika: Sage Publications, Inc, 2014.
- Möller, Anne Marthe, and Mark Boukes. "Online Social Environments and Their Impact on Video Viewers: The Effects of User Comments on Entertainment Experiences and Knowledge Gain during Political Satire Consumption." New Media & Society 25, no. 5 (May 3, 2023): 999–1022. https://doi.org/10.1177/14614448211015984.
- Muftah, Muneera. "Machine vs Human Translation: A New Reality or a Threat to Professional Arabic–English Translators." *PSU Research Review* 8, no. 2 (2022): 484–97. https://doi.org/10.1108/PRR-02-2022-0024.
- Muhamad Raihan, Nur Hizbullah, and Sayyed Zuhdi Abdil Ghany. "Deictic Dimensions in Translation: Analysis of Personal Deixis in the Indonesian and Arabic Versions of Blue Lock Comics." *International Journal of Arabic Language Teaching (IJALT)* 7, no. 01 (January 15, 2025): 73–90. https://doi.org/10.32332/ijalt.v7i01.9913.
- Mulloh, Tamim, Ade Astri Deviana, and Muhammad Ridho Naufal. "Satire: Sindiran Humor Dalam Naskah Drama Arab." *Mantiqu Tayr: Journal of Arabic Language* 4, no. 1 (December 6, 2023): 21–36. https://doi.org/10.25217/mantiqutayr.v4i1.4000.
- Mulyanto, Agus, Andarini Rani Probowati, and Ratih Purnamasari. "Analisis Gaya Bahasa Sindiran Dalam Video Tiktok Rian Fahardhi." *Semantik* 12, no. 2 (2023): 141–60. https://doi.org/10.22460/semantik.v12i2.p141-160.
- Nababan, M. Rudolf. Teori Menerjemah Bahasa Inggris. Yogyakarta: Pustaka Pelajar, 1999.
- Newmark, Peter. A Book Of Translation. London: Prentice hall, 1988.
- *− − − . About Translation.* Clevedon: Multilingual Matters, 1991.
- *− − − . Approaches to Translation.* Oxford: Pergamon Press, 1981.
- Oktari, Sri Jomila, Desi Hariyanti Harahap, and Nur Hasaniyah. "Artificial Intelligence

- and the Transformation of Arabic Meaning: Challenges and Opportunities." *Abjadia : International Journal of Education* 10, no. 1 (April 2, 2025): 1–18. https://doi.org/10.4018/978-1-7998-5015-1.ch002.
- Shao, Bin, Jiawei Yan, Jing Zhang, Lili Liu, Ye Chen, and Allen R. Buskirk. "Riboformer: A Deep Learning Framework for Predicting Context-Dependent Translationfile:///D:/IJOSSER-5-10-63-70.Pdf Dynamics." *Nature Communications* 15, no. 1 (2024): 1–10. https://doi.org/10.1038/s41467-024-46241-8.
- Slim, Amel, and Ahlem Melouah. "Low Resource Arabic Dialects Transformer Neural Machine Translation Improvement through Incremental Transfer of Shared Linguistic Features." *Arabian Journal for Science and Engineering* 49, no. 9 (2024): 12393–409. https://doi.org/10.1007/s13369-023-08543-9.
- Theum, Dita Chrysan, and Candra Rahma Wijaya Putra. "Resepsi Satire Dunia Politik Dalam Novel Sabdo Cinta Angon Kasih Karya Sujiwo Tejo." *Madah: Jurnal Bahasa Dan Sastra* 12, no. 2 (2021): 171–83. https://doi.org/10.31503/madah.v12i2.371.
- Tosun, Sümeyra. "Machine Translation: Turkish-English Bilingual Speakers' Accuracy Detection of Evidentiality and Preference of MT." Cognitive Research: Principles and Implications 9, no. 1 (2024). https://doi.org/10.1186/s41235-024-00535-z.
- Verma, Kanishk, Maja Popović, Alexandros Poulis, Yelena Cherkasova, Cathal HÓbáin, Angela Mazzone, Tijana Milosevic, and Brian Davis. "Leveraging Machine Translation for Cross-Lingual Fine-Grained Cyberbullying Classification amongst Pre-Adolescents." *Natural Language Engineering* 29, no. 6 (2023): 1458–80. https://doi.org/10.1017/S1351324922000341.
- Yatuzzuhriyyah, Ulfiyatuzzuhriyyah, and Evert Haryanto Hilman. "Techniques of Translation of Cultural Words and Its Quality in the Midnight Library Novel." *Jurnal Basis* 9, no. 2 (2022): 269–78. https://doi.org/10.33884/basisupb.v9i2.6238.
- Zou, Aixiao, Xuanxuan Wu, Xinjie Li, Ting Zhang, Fuwei Cui, and Jinan Xu. "Curriculum Pre-Training for Stylized Neural Machine Translation." *Applied Intelligence* 54, no. 17 (2024): 7958–68. https://doi.org/10.1007/s10489-024-05586-9.