



Using Chatgpt for Translating Songs Between Bahasa Indonesia and English

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Abstract

As a first-year PhD student, I was inspired by my lecturers to embark on this research to explore self translation with the aid of AI, specifically ChatGPT by OpenAI. This study investigates the potential benefits and challenges of using AI to translate Christian praise and worship songs between Bahasa Indonesia and English. By focusing on linguistic accuracy, cultural adaptation, and artistic integrity, using a qualitative case study approach, I evaluated the efficacy of ChatGPT in enhancing the quality and efficiency of self translation in worship music. My research involved translating five songs—two from English to Indonesian, two from Indonesian to English, and one from Batak to English—using an iterative process that combined ChatGPT's outputs with Google Translate and human expertise. The findings reveal that while ChatGPT can effectively bridge linguistic gaps and maintain the original compositions' integrity, human involvement remains crucial for ensuring linguistic, cultural, and contextual accuracy. This study underscores the potential of AI as a valuable tool in the self-translation of worship songs, highlighting the importance of human-AI collaboration.

INTRODUCTION

The integration of artificial intelligence (AI) into various creative domains has revolutionized traditional practices and opened new avenues for innovation. In the realm of language and music, AI platforms such as ChatGPT offer opportunities to assist artists in the self-translation process. Music transcends cultural and linguistic boundaries, yet the lyrics often remain confined to their original languages. Translating songs from English to Bahasa Indonesia and vice-versa not only makes the music accessible to a broader audience but also facilitates cultural exchange. Traditional translation methods, have struggled to preserve the lyrical nuances, such as rhythm, rhyme, and cultural context (Schreiber, 2019). With advancements in artificial intelligence (AI), particularly language models like ChatGPT, the process of song translation is evolving, offering new possibilities for maintaining these nuances (Brown et al., 2020). Christian praise and

worship songs are integral to spiritual practices, conveying theological truths and facilitating worship experiences. Translating these songs between English and Bahasa Indonesia involves preserving their doctrinal accuracy, emotional resonance, and musicality. Many rich Indonesian Christian songs remain inaccessible to English-speaking audiences due to the lack of translations that preserve their spiritual depth and poetic quality. I train the Women's Fellowship Choir in a church every Saturday, and they wanted to learn English through songs. The opportunity presented itself for me to combine learning English with singing meaningfully, and translating songs for this purpose.

While AI has demonstrated significant potential in text translation, translating songs involves unique challenges. The application of ChatGPT in translating songs between English and Bahasa Indonesia remains largely unexplored, especially about its effectiveness, and identifying areas for improvement. Fewer still are studies researching the translation of religious songs. This study seeks to fill this research gap.

1.3 Research Questions RQ1: How effective is ChatGPT in translating Christian praise and worship songs from Bahasa Indonesia to English and vice-versa while preserving the spiritual and poetic qualities of the original compositions? RQ2: What are the challenges and limitations of using AI, specifically ChatGPT, in translating culturally rich and spiritually significant texts, and how can these be addressed through collaborative human AI efforts?

Objectives

1. To evaluate the accuracy and quality of ChatGPT's translations of Christian praise and worship songs from Bahasa Indonesia to English and vice-versa, focusing on maintaining the spiritual depth and poetic quality of the original texts.
2. To identify and analyze the challenges encountered during the AI-assisted translation process, and to propose methods for enhancing linguistic, cultural, and contextual accuracy through human-AI collaboration.

1.5. Significance Leveraging AI for self-translation of Christian praise and worship songs between English and Bahasa Indonesia is relatively new and not many research studies have been published on it. Considering its potential to streamline the translation process while preserving artistic expression this study investigates how AI platforms like ChatGPT can assist in this translation process, analyzing both the benefits and potential pitfalls. Understanding how AI, specifically ChatGPT, can be leveraged to translate songs while preserving their artistic and cultural essence can lead to better translation tools and foster global cultural exchange and appreciation. It adds new knowledge to a current trend in using AI, an essential tool in our modern world.

No research on translation is complete without first mentioning the classical work of Peter Newmark (1988). Although it was written a long time ago, it remains relevant for researchers investigating translation today. Peter Newmark's translation theory offers a comprehensive framework for understanding and practicing translation, emphasizing the balance between fidelity to the source text and adaptability to the target audience. Newmark distinguishes between two main types of translation methods, namely, communicative, and semantic. Communicative translation aims to produce the same effect on the target audience as the original text did on its audience, prioritizing readability, and naturalness in the target language (Newmark, 1988). In contrast, semantic translation focuses on retaining the exact meaning and form of the original text as closely as possible, emphasizing the source text's stylistic and semantic features (He, 2024). Newmark's theories also include a detailed classification of translation procedures for smaller units of text. These procedures range from transference, which involves borrowing words directly from the source text, to modulation, which changes the form of the message, usually by reversing the point of view (Newmark, 1988). By categorizing these methods and procedures, Newmark provides translators with a toolkit to handle various translation challenges, allowing for greater precision and flexibility in their work (He, 2024). The application of Newmark's theories extends beyond literary texts to practical fields such as tourism and cultural communication. Recent studies, such as those by He (2024) and other scholars, demonstrate the effectiveness of Newmark's communicative translation in enhancing the clarity and cultural adaptability of translated texts. These studies underscore the importance of culturally sensitive translation practices that enrich the target audience's experience and facilitate global cultural exchange (He, 2024; Newmark, 1988). Thus, Newmark's contributions remain pivotal in contemporary translation studies, offering valuable insights for translators working across diverse genres and contexts.

Another worthwhile reference must be made to Nida's Dynamic Equivalence Theory which emphasizes the importance of creating the same effect on the target audience as the source text had on the original audience (Nida, 1964). Nida's Dynamic Equivalence Theory, introduced in the 1960s, focuses on translating the meaning and intent of the original text to produce a similar effect on the target audience. This approach prioritizes naturalness in the translation, making it read as if originally written in the target language, and emphasizes cultural adaptation to ensure the text is relevant and understandable to the new audience. Recent research highlights the importance of

cultural sensitivity (Wang, 2020), the impact of AI and machine translation on maintaining dynamic equivalence (Johnson & Zhang, 2021), and methods for teaching this theory in translation education (Martínez, 2019). These studies show that understanding cultural nuances, leveraging technology, and effective teaching practices are crucial for achieving dynamic equivalence in translations.

Challenges in Song Translation Both Newmark and Nida theories highlight the demands and challenges placed on the translation process. For this study, the first challenge is maintaining theological integrity. This refers to ensuring that doctrinal meanings are preserved in translation (Larson, 1984). The second challenge is in cultural adaptation which mean adapting lyrics to resonate with the target culture while retaining original meaning (Hervey & Higgins, 1992). The third challenge concerns prosody and phonetic constraints. This means maintaining the prosody and phonetic characteristics of the original song in the target language is particularly challenging due to differences in syllable structure and stress patterns.

2.3 AI in Translation The use of AI in translation especially with respect to songs is both interesting and perplexing as the capabilities of AI related to the role of machine learning and natural language processing in translation tasks is a trending area of study (Wu et al., 2016). There are limitations of AI and these issues are related to context understanding, cultural nuances, and emotional depth (Hutchins, 2005). Previous research has explored AI's role in translating poetry and prose, highlighting its potential to handle complex linguistic structures (He et al., 2021). However, translating songs, particularly between English and Bahasa Indonesia, remains under-explored. Studies suggest that AI could potentially address rhythm and rhyme by incorporating prosodic features into its models (Lample et al., 2019). Translating songs is more complex than translating regular text. It requires maintaining the song's melody, rhyme scheme, and cultural nuances (Low, 2017). Traditional translation methods often struggle with these aspects, leading to translations that may be accurate in meaning but fail to convey the original song's emotional and artistic depth.

Current tools for song translation primarily rely on manual processes with some machine assistance. While these tools can aid in translating lyrics, they often fall short in preserving the artistic integrity of the songs (Schreiber, 2019). Guo, et. al. (2022) developed a tool for automatic song translation (AST) for tonal languages and addresses the unique challenge of aligning words' tones with melody of a song in addition to conveying the original meaning. They propose three criteria for effective AST -- preserving meaning, singability* and intelligibility -- and design

metrics for these criteria. We develop a new benchmark for English--Mandarin song translation and develop an unsupervised AST system, Guided AliGnment for Automatic Song Translation (GagaST), which combines pre-training with three decoding constraints. Both automatic and human evaluations show GagaST successfully balances semantics and singability*. Inspired by the work of Guo et. al., I conducted this study to investigate how a readily available tool like ChatGPT can be used to circumvent the challenges mentioned by previous studies. *Singability is not yet available in conventional dictionaries but used in music research studies. It means 'easy to sing', and in Para. 2.7, I elaborated further.

Recent advancements in NLP, especially with models like GPT-3 and GPT-4, have shown significant improvements in text translation tasks (Vaswani et al., 2017). These models use deep learning techniques to understand context, syntax, and semantics, making them powerful tools for translation (Brown et al., 2020). ChatGPT, built on the transformer architecture, shows promise in various translation tasks due to its ability to generate coherent and contextually relevant text (Radford et al., 2019). Its application in song translation, especially between English and Bahasa Indonesia, remains relatively untested.

Translating worship songs between English and Bahasa Indonesia presents unique challenges, especially when considering theological concepts, cultural nuances, and maintaining the musical elements such as rhyme and meter. For example, in "How Great Is Our God" by Chris Tomlin, the primary difficulties in translating such songs involve rendering theological concepts accurately while maintaining the song's rhyme and meter. The theological depth must be preserved to ensure the song's message remains intact and meaningful in the target language (Echols, 2021). Additionally, cultural references and idiomatic expressions need careful handling to resonate with the Indonesian audience. In "S'bab Engkau Besar" by Nikita, translating from Bahasa Indonesia to English involves preserving the emotional tone and theological depth of the original lyrics. This includes maintaining the original message's intensity and spiritual significance while adapting the meter to fit the melody (Sari, 2019). This process is particularly challenging due to differences in linguistic structures and cultural expressions between the two languages. AI's role in this process includes adapting the meter to fit the melody while keeping the original message intact. AI tools are being programmed to recognize and adapt to the nuances of worship songs, making the translation more accurate and emotionally resonant (Johnson & Zhang, 2021). Thankfully, recent advancements in AI and machine translation have shown potential in handling idiomatic

expressions and cultural references. AI tools are being developed to adapt translations while considering the cultural and linguistic context, ensuring the translated text retains its original impact (Guerberof Arenas, 2020).

In "Translating Song: Lyrics and Texts", Low (2017) presents the Pentathlon Principles, a framework for creating effective singable translations of songs. This approach is designed to balance five key criteria to ensure that the translated lyrics can be sung naturally and meaningfully to the pre-existing music. Here are the five principles: 1. *Singability: The translated lyrics must be easy to sing. This means they should fit well with the musical composition, considering the melody, rhythm, and phrasing of the original song. 2. Sense: The translation should preserve the meaning and message of the original lyrics. While some adaptations might be necessary to fit the musical constraints, the core message should remain intact. 3. Naturalness: The lyrics should sound natural in the target language. They should flow smoothly and be free of awkward phrasing or forced syntax that might distract the singer or the audience. 4. Rhythm: The translation must match the rhythm of the original song. This involves careful attention to syllable counts and stress patterns to ensure that the lyrics align with the musical rhythm. 5. Rhyme: Where possible, the translated lyrics should maintain the rhyme scheme of the original. While this might be challenging, especially across different languages, rhyme contributes to the musicality and memorability of the song. In summary, Low's (2017) Pentathlon Approach emphasizes the need for translators to balance these five criteria, rather than prioritizing one at the expense of others. This approach is particularly relevant for translating songs intended for performance, where both musical and lyrical fidelity are crucial.

Low's Pentathlon Principles can be further distilled by Franzone's concept of Approximation and Appropriation (Franzone, 2022). Approximation refers to how closely a translation comes to replicating the source song's qualities, such as textual, musical, stylistic, and visual elements. It is about "coming or getting near" to the original. Appropriation involves adapting the song to fit new contexts or purposes, effectively "making it your own." This can include changes for sociocultural, discursive, or ethnic reasons. Franzone et. al. (2021) acknowledges the inherent variability in translating songs, given the different genres, contexts, and performance requirements. Examples include translating hit tunes, music videos, hymns, scout songs, and opera arias. Song translations often cannot fully capture all aspects of the original. Instead, they deliver an approximation and adapt certain qualities to suit new situations,

highlighting the flexibility needed in this process. The concepts of approximation and appropriation, while used in music and translation research, have been less prominent in general translation studies due to their perceived imperfections. However, Franzon argues that these terms are useful and necessary for understanding the complexities of song translation. By framing song translation in terms of these two concepts, Franzon provides a nuanced understanding of how translations can maintain fidelity to the original while also adapting to new cultural and contextual demands. This approach helps make space for the unique challenges and creative solutions inherent in song translation within the broader field of translation studies.

A study by Khoshsaligheh, et. al. (2023) on translation provides insights including the challenges and considerations involved. Firstly, concerning contextual considerations, they emphasize the importance of understanding the cultural and situational context of the lyrics. This is particularly relevant for worship songs, where theological concepts and cultural nuances must be accurately conveyed to ensure the message remains meaningful in the target language. Secondly, concerning linguistic and musical elements, their study discusses the interplay between linguistic content and musical elements like rhyme, rhythm, and meter. In the context of worship songs, maintaining these musical elements is crucial for the song to be sung and appreciated in the same way as the original. This involves adapting the translation to fit the melody while preserving the theological and emotional depth of the lyrics. Thirdly, concerning technological tools, and the use of AI in the translation process, they highlight how these tools can assist in managing complex translations. For worship songs, AI can help handle idiomatic expressions, cultural references, and maintain the integrity of the song's structure and message (Khoshsaligheh et al., 2023). In summary, their study is applicable to the translation of worship songs between English and Bahasa Indonesia, where maintaining the original song's impact, both theologically and musically, is essential. The reference underlines the need for a careful and nuanced approach, supported by technology, to achieve effective and resonant translations. I subscribe to what these researchers have said, and followed closely to what they have found as I progressed in this research.

METHODOLOGY

The research involves both practical translation tasks and expert evaluations. I chose a total of five songs (see Table 1) because each of these songs is not available in the target language for choirs or congregation to sing. In the chapter on Findings and Discussion, I will explain what I have found in self-translating each song.

Table 1: Selection of Songs

Data Point	Title of Song	Composer (Year First Released)	Translation Task
1	Ku Mau Cinta Yesus Salamanya	Mickey Cho (2012)	Bahasa Indonesia to English
2	Kusiapkan Hatiku Tuhan	Mus Mulyadi (2017)	Bahasa Indonesia to English
3	Come Holy Spirit	Bill & Gloria Gaither (1965)	English to Bahasa Indonesia
4	Our God Reigns	Leonard Smith (1974)	English to Bahasa Indonesia
5	Tuhan Yesus Siparmahan	Victor Hutabarat (2010)	Batak to English

This study adopts a qualitative case study approach to evaluate the effectiveness of ChatGPT in translating songs between English and Bahasa Indonesia. Firstly, using ChatGPT, I translated two English songs to Bahasa Indonesia, two songs from Bahasa Indonesia to English, and one song from Batak, an ethnic Indonesia language, to English. At the same time, using Google Translate, I checked for language accuracy. Figure 1 shows the process that I used to translate the songs. From my experience, I found that the whole process is centered on ensuring accurate nuancing for Christian doctrines. I elaborated on this in Data Point 4 when translating the song ‘Our God Reigns’. Secondly, the translations were reviewed and evaluated in music and linguistics. For English translations, I am a qualified English Language teacher with more than twenty years’ experience. For Bahasa Indonesia and Batak translations, I consulted a local pastor of Batak origin, who is proficient in both Bahasa Indonesia and several Batak languages, and has a PhD in Theology from Dallas Theological Seminary (USA). Finally, the songs were performed during Sunday church services by the Women’s Fellowship Group for validation of general acceptance.



Figure 1: Process of Translation

RESULT AND DISCUSSION

Translating from Bahasa Indonesia to English

Data Point 1: *Ku Mau Cinta Yesus Selamanya*

This song means ‘I will love Jesus Forevermore’. It was first released in Bahasa Indonesia with a Mandarin version in 2012. It gained popularity quickly, and was used in many church worship services. However, there was no English version available to-date. Table 2 below shows the lyrics in both source language (column 1) and composer translation of the lyrics (not-singable; semantically correct).

Table 2: Data Point 1 (<i>Ku Mau Cinta Yesus Selamanya</i>)	
Source Language: Bahasa Indonesia	Target Language: English
<p>Ayat 1:</p> <p>Ku mau cinta Yesus selamanya Ku mau cinta Yesus selamanya Meskipun badai silih berganti dalam hidupku Ku tetap cinta Yesus selamanya</p> <p>Reff:</p> <p>Ya Abba, Bapa ini aku anakMu Layakkanlah seluruh hidupku Ya Abba, Bapa ini aku anakMu Pakailah sesuai dengan rencanaMu</p>	<p>Verse 1:</p> <p>I will always love you Jesus Forever I will always love you Jesus Forever Even though I go through storms in my life I will always love you Jesus Forever</p> <p>Chorus:</p> <p>Yes, Abba, Father, I am Your child Make my life worthy of You. Yes, Abba, Father, I am Your child Use me according to Your purpose</p>

Because it was already semantically translated by the composer, I first made the stanza singable according to the syllable-count. Then I prompted ChatGPT to make the stanza rhyme. Table 3 below shows the results. This was a new experience for me on the use of ChatGPT and its capability to revise stanzas to rhyme and keep singability intact.

Table 3: Data Point 1 (Ku Mau Cinta Yesus Selamanya) – Revised English Lyrics	
Source Language: Bahasa Indonesia	Target Language: English
Ayat 1: Ku mau cinta Yesus selamanya Ku mau cinta Yesus selamanya Meskipun badai silih berganti dalam hidupku Ku tetap cinta Yesus selamanya	Verse 1: I will love Jesus my Lord forevermore I will love Jesus my Lord forevermore Many storms around me, and many troubles come ashore I will love Jesus my Lord forevermore
Reff: Ya Abba, Bapa ini aku anakMu Layakkanlah seluruh hidupku Ya Abba, Bapa ini aku anakMu Pakailah sesuai dengan rencanaMu	Chorus: Yah Abba, Bapa, I'm your child, you are my God Give me faith and strength each day to go Your way Yah Abba, Bapa, I'm your child, you are my God Give me faith and strength each day to trust and obey

Data Point 2: *Kusiapkan Hatiku Tuhan*

This song means 'I Prepare My Heart, God' is another recent song that gained popularity, and used widely in church services. Different singers have posted YouTube videos on it. Again, no singable English version is available to date. Table 4 shows the results.

Table 4: Data Point 2 (Kusiapkan Hatiku Tuhan)	
Source Language: Bahasa Indonesia	Target Language: English
Ayat 1: Kusiapkan hatiku Tuhan tuk dengar firman-Mu saat ini Ku sujud menyembah-Mu Tuhan, masuk hadirat-Mu saat ini Curahkan urapan-Mu Tuhan bagi jemaat-Mu saat ini	(Verse 1) (Not translated)

Table 4: Data Point 2 (Kusiapkan Hatiku Tuhan)	
Source Language: Bahasa Indonesia	Target Language: English
Kusiapkan hatiku Tuhan tuk dengar firman-Mu	
Reff: Firman-Mu Tuhan tiada berubah Dahulu sekarang selama-lamanya Tiada berubah Firman-Mu Tuhan penolong hidupku Kusiapkan hatiku Tuhan Tuk dengar firman-Mu	(Chorus): Holy Word of God forever unchanging From now and evermore, forever evermore God changes not Holy Word of God, my helper forever true I surrender all my heart to You Let Your word now live in me

Bahasa Indonesia is not my native tongue. For this song, I first used Google Translate to understand the meaning in English. Then I found out the beauty of the Indonesia language, that its use of prefixes and suffixes rendered many syllables to the stanza. It was a

challenge to translate the entire song. Instead, I focused on the chorus and translated using the process that I mentioned earlier.

Translating from English to Bahasa Indonesia

Data Point 3: Come Holy Spirit

For this research, the most challenging song to translate was this one. It was one where I learn the most from the experienced of total loss being caught in between two differing landscapes of cultural and language nuancing. Firstly, it was difficult to translate ‘Sweet Spirit’ to Bahasa Indonesia. The concept of endearment and deep worship of God’s Spirit could not be captured in the target language, and was best left out, in my opinion. Secondly, the full extent of English metaphorical expressions cannot be captured. For example, the use of the metaphor ‘Balm to the sore’ was beautiful and romantic in English, but the most Indonesian equivalent was ‘Balsam’ and this was used. Another example were the lines in Verse 2, namely, ‘Come like a spring in the desert’ and ‘the withered of soul’. The pastor whom I consulted commented that he was contended with the semantic equivalent and grammatically correctness within artistic allowance that could fit the melody. Table 5 shows the results of the final translated version used for performance.

Table 5: Data Point 1 (Ku Mau Cinta Jesus Selamanya) – Revised English Lyrics	
Source Language: English	Target Language: Bahasa Indonesia
Chorus: Come, Holy Spirit, I need you Come, <i>sweet Spirit</i> , I pray Come in your strength and your power Come in your own gentle way	[Reff] Roh kudus yang kuperlukan Datanglah aku berdoa Datang serta kuat kuasaMu Dengan cara yang lembut
Verse 1: Come as a rest to the weary Come as a <i>balm to the sore</i> Come, Lord, as strength to my weakness Fill me with joy evermore	[Ayat 1] Tempat rehat buat yang susah Balsam pengobat luka Kekuatan bagi yang lemah Hidup selalu penuh suka
Verse 2: Come like a <i>spring in the desert</i> Come to the <i>withered of soul</i> Lord, let your sweet healing power Touch me and make me whole	[Ayat 2] Seperti air pancur di gurun Mengalir bagi yang lelah pun Datanglah permohonan ku Sentuh dan pulihan ku

Data Point 4: Our God Reigns

It is translating this song that I learnt the importance of doctrinal nuancing, and this means checking with reliable sources for accuracy. Line 1: ‘How lovely on the mountains are the feet of Him’ is taken from King James English Bible from the book of Isaiah Chapter 52, verse 7. Clearly,

the original meaning was about the coming of a messenger across the mountains to being good news so people could rejoice and celebrate. However, when translated by both ChatGPT and Google Translate, the response ‘Indahnya kakinya di Gurung-gurung’, which literally means that his feet on the mountain are lovely. The literal meaning did not carry the deep idiomatic expression of the original. Consequently, I referred to the authorized Bahasa Indonesia version of the bible to obtain the biblical translation. The bible version states ‘Betapa indahnya kelihatan dari puncak bukit-bukit kedatangan pembawar berita’. Consequently, I decided to translate to ‘Indahlah kedatangan orang di gunung. Firstly, the use of ‘orang’ portrays the human herald coming with the news. Secondly, to retain the romantic notion of ‘mountains’, I used ‘gunung’ instead. It also fits the melody. The results are shown in the following Table 6.

Table 6: Data Point 4 (Our God Reigns)	
Source Language: English	Target Language: Bahasa Indonesia
<p>Verse 1: How lovely on the mountains are the feet of Him Who brings good news, good news Announcing peace, proclaiming news of happiness Our God reigns, our God reigns</p> <p>Chorus: Our God reigns, our God reigns Our God reigns---, our God reigns</p> <p>Verse 2: He had no stately form He had no majesty That we should be drawn to Him He was despised and we took no account of Him Yet now he reigns with the Most High</p>	<p>Ayat 1: Indahlah kedatangan orang di gunung Bawa kabar, b'rita suka Mengumumkan damai dan kabar gembira Tuhan kita, dialah Raja</p> <p>Reff: Tuhan kita, dialah Raja Tuhan kita, dialah Raja</p> <p>Ayat 2: Dia tak tampan, rupanya tak menawan Tak menarik, biasa saja Dia dihina, tiada diperhitungkan Dialah Raja, Maha Kuasa.</p>

Data Point 5: Tuhan Yesus Siparmahan

My purpose for including the self-translation of a Batak song to English is two-fold. Firstly, I am curious to know if ChatGPT has the capacity and data to effectively translate a lesser-known and used language. Secondly, this popular Batak song has an Indonesian version, but no English version to-date. The following Table 7 shows the results.

Table 7: Data Point 5 (Tuhan Yesus Siparmahan)	
Source Language: Batak Toba	Target Language: English
[Ayat 1] Tuhan Yesus siparmahan Au birubiruNa do Jesus gok di Ho rohangku Sai ihuthononku Ho Reff: Sai ihuthononku Ho Sai ihuthononku Ho Jesus gok di Ho rohangku Sai ihuthononku Ho [Ayat 2] Jumpa masa sorimago Tung pangapul Ho gogo Ia bogasMi huida Sai ihuthononku Ho	Verse 1: The Lord Jesus is my shepherd And His sheep am I to Him Jesus, take my heart, I promise All my life I follow you Chorus: Follow you, I will surrender Follow you, I will obey Jesus, take my heart, oh so tender All my life, I'll walk your way [Verse 2] In my sadness, you are comfort In my darkness, you are light I will follow in your footsteps All my life, your path is right

Firstly, ChatGPT does not have enough background data to translate from Batak to English. Neither does Google Translate. I found that both ChatGPT and Google Translate use Bahasa Indonesia as the nearest possible language in their algorithms. While Google Translate could not respond, ChatGPT did and it confessed that it does not have enough data on Batak. What ChatGPT could do was to suggest the rhyming pattern after I have human translated into English. Secondly, nuancing and meaning is still the driving force behind the translation. For Verse 1, ChatGPT gave a beautiful rhyming pattern as follows:

Line 1: The Lord Jesus is my guide,

Line 2: And with Him, I'll abide.

Line 3: Jesus, take my heart, I vow,

Line 4: All my life, I'll follow now

However, except for Line 4, the other lines fell short of the original meaning of the Verse 1. Consequently, I stuck to the human translation instead for the final performance of this song.

Effectiveness of ChatGPT in Song Translation

Both the Bahasa Indonesian Batak pastor and I found that ChatGPT can produce translations that are generally accurate and contextually relevant. In four of the five cases, the AI preserved the original meaning of the lyrics and conveyed the emotional tone effectively. The women's fellowship choir who rehearsed and performed the songs provided positive feedback on

the singability of the songs. They reported that it was interesting to be able to sing their favourite songs in English, and welcomed the fact that they could learn English from practicing together before their performances. The pianist who accompanied on the electric organ also provided positive feedback that she could follow the tune, and there was no compromise in the rhythm and beat of each song. Recent studies have shown that AI translation tools, including ChatGPT, have made significant strides in maintaining semantic accuracy and contextual relevance (He et al., 2021; Lample et al., 2019). However, they often struggle with idiomatic expressions and cultural nuances, which are crucial in song translation (He et al., 2021). This aligns with findings from previous research, such as Wu et al. (2020), which highlight that AI's understanding of context improves over time but still requires human intervention for more nuanced texts. Translating songs between English and Bahasa Indonesia presents additional challenges due to the linguistic and cultural differences between these languages. According to Katan (2014), effective translation in cross-cultural communication necessitates an understanding of both linguistic structures and cultural contexts. ChatGPT's current capabilities demonstrate a basic understanding of cultural context, but further development is needed to fully capture the depth and emotional resonance of songs across different cultures. Both the pastor and I appreciated ChatGPT's ability to handle idiomatic expressions and convey the general mood of the songs. However, we noted that translations often required post-processing to adjust the lyrics to fit the musical structure. Integrating prosodic features into ChatGPT's training process could enhance its ability to handle rhythm and rhyme. Additionally, incorporating a broader cultural context in the training data could improve the preservation of cultural nuances (Lample et al., 2019). Collaboration with musicologists and cultural experts during the model's development could also lead to more refined and effective translation tools. Despite its strengths, ChatGPT faced several challenges in maintaining musicality, particularly with rhythm and rhyme. For example, while the translation of the songs in Data Points 1 to 4 was accurate in meaning, it required significant adjustments to fit the melody and maintain the rhyme scheme. This can be solved with several iterations on ChatGPT combined with human translation. Cultural nuances were sometimes missed, indicating the need for a broader cultural context in the AI's training data (He et al., 2021). According to Venuti (2017), translation is not just a linguistic act but a cultural one, where the translator's role is to mediate between cultures to preserve the original text's meaning and impact. The findings indicate that while ChatGPT holds significant promise for song translation, particularly in linguistic accuracy

and context, it still requires enhancement in handling musical elements. These results align with previous studies on AI in artistic translation, which emphasize the need for specialized training to address the unique challenges of creative texts (He et al., 2021). Translating songs between English and Bahasa Indonesia presents additional challenges due to the linguistic and cultural differences between these languages. In fact, after I translated the Batak song to English, I fed it back to ChatGPT to add to its database.

Translating songs involves unique challenges that go beyond typical text translation. The rhythmic and melodic structure of songs means that translations must not only be semantically accurate but also fit the musical framework (Low, 2017). This study found that ChatGPT could adapt lyrics to fit the melody and rhythm of the original song with explicit prompting, such as 'keep to the syllable counts.' Low (2017) emphasizes that song translation requires a careful balance between maintaining meaning and fitting the musical structure, which is an area where AI still needs improvement. In terms of theological and linguistic challenges, the focus was on doctrinal accuracy i.e. ensuring that the doctrinal principles were preserved accurately. This must be guided by human experts as this study could not establish ChatGPT's ability to understand and translate complex theological concepts quantitatively. Likewise, the study did not set out to quantitatively measure ChatGPT's ability to capture cultural nuances and emotional depth. The nuancing was guided by human experts, and the emotional depth was achieved by the humans performing the songs.

CONCLUSION AND SUGGESTION

This study demonstrates that ChatGPT can effectively translate song lyrics between English and Bahasa Indonesia, often producing translations that are accurate and contextually relevant. However, challenges remain in maintaining musicality and cultural nuances. AI platforms like ChatGPT offer significant potential in translating Christian praise and worship songs, providing valuable assistance in maintaining linguistic accuracy and speeding up the translation process. However, human supervision remains crucial to ensure theological integrity, cultural relevance, and emotional resonance. This study highlights the complementary roles of AI and human translators in enriching worship experiences across languages.

5.2. Implications and Future Research

The research highlights the potential of AI in the creative arts, suggesting that with further development, AI models like ChatGPT could revolutionize song translation. This has

significant implications for the global music industry, facilitating cross-cultural exchange and appreciation. Future studies should focus on integrating musical and cultural elements into AI training processes. Exploring collaborations between AI developers, musicologists, and cultural experts could lead to more refined and effective translation tools. Additionally, investigating user experiences and feedback on AI-translated songs could provide valuable insights for further improvements. While AI is not yet perfect in translating songs, advancements like ChatGPT represent a significant step forward. Continued research and development in this area promise to break down linguistic barriers in music, bringing the world closer together through the universal language of song.

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