

Khiemnungan Parallel Text Corpus: Linguistic Features and Structures



KHIEMNUNGAN PARALLEL TEXT CORPUS: LINGUISTIC FEATURES AND STRUCTURES



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Annotated, quality language data (both-text & speech) and tools in Indian Languages to Individuals, Institutions and Industry for Research & Development - Created in-house, through outsourcing and acquisition.

Authors:

***Dr. Kamaraj S,
Dr. Rejitha K. S,
Dr. Narayan Choudhary,
Prof. Shailendra Mohan***

**Linguistic Data Consortium for Indian Languages
Central Institute of Indian Language
Mysuru, India-570006**

भारतीय भाषा संस्थान

उच्चतर शिक्षा विभाग, शिक्षा मंत्रालय, भारत सरकार, मानसगंगोत्री, हुन्सूर रोड, मैसूरु-570006, कर्नाटक

CENTRAL INSTITUTE OF INDIAN LANGUAGES

Department of Higher Education, Ministry of Education, Government of India
Manasagangotri, Hunsur Road, Mysuru-570006, Karnataka

www.ciil.gov.in :: e-✉ ciil.publication@gmail.com :: ☎ +91-821-234-5182

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Authors: Dr. Kamaraj S, Dr. Rejitha K. S, Dr. Narayan Choudhary, Prof. Shailendra Mohan

Contributors: Songmao M, Heme

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KHIEMNUNGAN PARALLEL TEXT CORPUS

Dr.Kamaraj S

1.1 LDC-IL PARALLEL TEXT CORPUS

LDC-IL have developed parallel corpus in Indian mother tongues. India has 270 mother tongues as per 2011 census. Most of these mother tongues have no written text readily available and they are mostly oral languages. Most of them do not have any script of their own or use one or more than one dominant script used in that region. Following the requirements of the NEP-2020, LDC-IL initiated to collect sentences from different mother tongues that could give an idea about the basic structure of these 270 mother tongues.

A parallel corpus is a collection of texts in two or more languages that are carefully aligned sentence wise in pairs and placed either side by side or matched with a common sentence/phrase identification number. It is widely used in linguistics, translation studies, and Natural Language Processing. Researchers use it to compare vocabulary, grammar, and meaning across languages, while computational systems rely on it to train statistical and neural machine translation models. Parallel corpora also support language learning by providing real translation examples and enable cross-language information retrieval, allowing users to access information in multiple languages efficiently.

LDC-IL developed a framework to accommodate all the linguistic features of mother tongues. The sentences were collected from Indian scheduled languages especially from descriptive grammar books. The sentences cover the general grammatical and structural types like adjectival phrases, adverbial phrases, compounding, Interrogative sentences, Imperative sentences, different speech types, statements, structural question, coordination, subordination and so on. Moreover, it includes linguistic features such as use of adposition, anaphora, derivational morphology, inflectional morphology and language specific features like emphasis, equative, possession, reciprocation, reflexive expression and so on. For more details on the source collection for this parallel corpus, please refer to the [LDC-IL Corpus Insights \(2025\)](#).

This parallel corpus can be used in AI development by enabling the creation of Indic multilingual foundation models, develop cross-lingual knowledge graphs and create low-resource language adapters. By providing high-quality linguistic data, it strengthens natural language understanding and generation. As India rapidly advances in the digital age, it is essential to preserve and promote undocumented mother tongues by bringing them onto digital platforms, ensuring they are sustained and able to thrive for future generations.

Low-resource languages have a significant impact on both AI development and digital world. When AI systems are trained mostly on high-resource languages, they become biased toward those linguistic and cultural contexts. Including low-resource languages helps build stronger multilingual foundational models. Exposure to diverse grammar structures, vocabulary, and linguistic patterns improves cross-lingual learning and generalization. Language carries cultural knowledge. Incorporating low-resource languages enriches AI systems with diverse worldviews,

idioms, and traditional knowledge systems. If a language is not supported digitally, its speakers may be excluded from online education, e-governance, healthcare services, and digital commerce. When digital tools support local languages, more people can participate in the economy. Local languages often contain indigenous knowledge about agriculture, medicine, environment, and culture and therefore bringing them into digital ecosystem safeguards the linguistic treasures that language might contain.

Supporting low-resource languages makes AI more inclusive, intelligent, and representative of linguistic diversity. In India, where hundreds of mother tongues co-exist, investing in low-resource language technologies is essential for equitable digital growth.

1.2 CHALLENGES IN CREATING A PARALLEL CORPUS

Creating a Parallel Corpus for mother tongues in India involves several linguistic, technical, and socio-cultural challenges. The major difficulty is the lack of standardized orthography in many regional and tribal mother tongues. Most of the mother tongues use the prominent script used in their region. Some mother tongues may use multiple scripts or even a newly created writing systems, which complicates the corpus development. Another challenge is the scarcity of written and digitized resources. Many mother tongues are used for daily communication only.

Dialectal variation is another serious issue, as a single mother tongue may have numerous regional varieties with differences in vocabulary, pronunciation, and grammar. This makes it difficult to ensure consistency and representativeness in the corpus. Accurate translation is a concerned matter. Proficient bilingual speakers may be limited for low-resource languages. Maintaining semantic equivalence across mother tongues with different cultural contexts can be challenging. Sometimes equivalent words are not available due to the socio-cultural differences. These factors affect large-scale parallel corpus development in Indian mother tongues. The creation of reliable and balanced parallel corpora for Indian mother tongues is a complex and resource-intensive task.

1.3 KHIEMNUNGAN: A BRIEF INTRODUCTION

Khiemnungan language is a Tibeto-Burman language predominantly spoken in the Noklak district of Nagaland in Northeast India, and also across the border in parts of Myanmar. It is spoken by the Khiemnungan Naga community and forms a central component of their ethnic and cultural identity. The language represents the rich linguistic diversity of the Naga group within the larger Sino-Tibetan language family. Unlike major literary languages of India, Khiemnungan developed primarily through oral tradition rather than through an early written classical tradition. The language has been transmitted across generations through folktales, origin myths, customary laws, ritual chants, festival songs, and oral narratives that reflect the worldview and social organization of the community. With the arrival of Christian missionaries and the spread of formal education in the late 19th and early 20th centuries, the Roman script was adopted for writing Khiemnungan. The orthography has since been adapted to represent its phonological system, including vowel distinctions and tonal features.

Khiemnungan oral literature is culturally rich, encompassing traditional songs, proverbs, legends, and historical narratives. In recent decades, written materials such as translated religious texts, hymn books, primers, and educational resources have contributed to the development of literacy and written literature in the language. Although Khiemnungan does not possess an ancient classical written heritage, it has deep historical roots within its community and continues to hold strong contemporary relevance. The language remains vital in cultural practices, community life, and traditional institutions. While its presence in print and broadcast media is limited compared to major Indian languages, ongoing documentation efforts and community-driven initiatives are helping to preserve and promote Khiemnungan for future generations.

1.4 KHIEMNUNGAN PARALLEL CORPUS

Khiemnungan language is an agglutinative Tibeto-Burman language with rich morphophonemic and tonal features. It exhibits various morphophonemic alternations, particularly in the marking of tense, aspect, mood, number, and case relations. Grammatical meanings are primarily expressed through suffixation, and productive compounding and derivational processes contribute to its lexical expansion. Khiemnungan generally follows a Subject–Object–Verb (SOV) word order, though discourse and pragmatic factors may allow a degree of flexibility. These structural characteristics make Khiemnungan linguistically rich and typologically significant among the Naga languages of Northeast India. Khiemnungan is written in the Roman script, which has been adapted to represent its phonological system, including vowel distinctions and tonal contrasts where necessary. Although it does not possess an indigenous ancient script derived from classical traditions, the adapted orthography effectively captures its phonemic distinctions.

Khiemnungan is a valuable resource for developing parallel text corpora with other Indian mother tongues. A parallel corpus involving Khiemnungan can serve as an important research resource for studying syntactic divergence, agglutinative morphology, tonal semantics, code-mixing phenomena, and script variation. Such studies are particularly relevant in multilingual contexts such as India and contribute significantly to the documentation, preservation, and linguistic analysis of lesser-documented tribal languages.

This Khiemnungan parallel corpus constitutes a systematically translated dataset derived from an original English corpus, ensuring structured cross-linguistic alignment and semantic correspondence

1.5 SUMMARY OF KHIEMNUNGAN PARALLEL CORPUS

The Khiemnungan parallel text corpus is aligned with English and 146 mother tongues of India. These mother tongues are Anal, Angami, Apatani, Are, Assamese, Awadhi, Bagheli/Baghel Khandi, Bagri Rajasthani, Bagri, Balti, Bengali, Bhadrawahi, Bharmauri/Gaddi, Bhojpuri, Bilaspuri Kahluri, Bodo, Brajbhasha, Bundeli/Bundel khandi, Chakru/Chokri, Chambeali/Chamrali, Chang, Chhattisgarhi, Chirr, Chungli, Churahi, Coorgi/Kodagu, Deori, Dhundhari, Dimasa, Dogri, Gangte, Garhwali, Garo, Gojri/Gujjari/Gujar, Gujarati, Gujar, Halabi, Handuri, Hara/Harauti, Haryanvi, Hindi Multani, Hindi, Irula/Irular Mozhi, Kabui, Kachchhi, Kangri, Kannada, Karbi/Mikir, Kashmiri, Khandeshi, Khari Boli, Khasi, Khezha,

Khortha/Khotta, Kisan, Kodava, Kokbarak, Kolami, Koli, Kom, Konda, Konkani, Konyak, Koya, Kudubi/Kudumbi, Kuki, Kurmali Thar, Ladakhi, Lepcha, Liangmei, Limbu, Lotha, Lyngngam, Magadhi/Magahi, Maithili, Malayalam, Malvi, Manipuri, Mao, Mara, Maram, Marathi, Maring, Mech/Mechhia, Mewari, Mewati, Miri/Mising, Mishmi, Mizo, Mongsen, Monpa, Mundari, Muwasi, Nawait, Nepali, Nimadi, Nissi, Nocte, Odia, Pahari, Paite, Palmuha, Pania, Pawari/Powari, Phom, Pnar/Synteng, Pochury, Poula, Punjabi, Purkhi, Rai, Rajasthani, Reang, Rengma, Rongmei, Sadan/Sadri, Sambalpuri, Sangtam, Sanskrit, Santali, Saurashtra/Saurashtri, Sema, Shina, Sindhi, Sirmauri, Sugali, Surjapuri, Talgalo, Tamil, Tangkhul, Telugu, Thado, Tibetan, Tikhir, Tripuri, Tulu, Urdu, Vaiphei, Wagdi, Wancho, Yerava, Yerukala/Yerukula, Yimchungre, Zeliang, Zemi, Zou.

There are 5,332 sentences/phrases in Khiemnungan which are systematically structured based on 159 grammatical categories. Khiemnungan has 30359 word count and 157110 character count. The corpus is aligned with 146 mother tongues and English, comprising 4,404,845 words (over 4.4 million tokens) and 23,374,289 characters (approximately 23.3 million).

1.6 REFERENCE

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