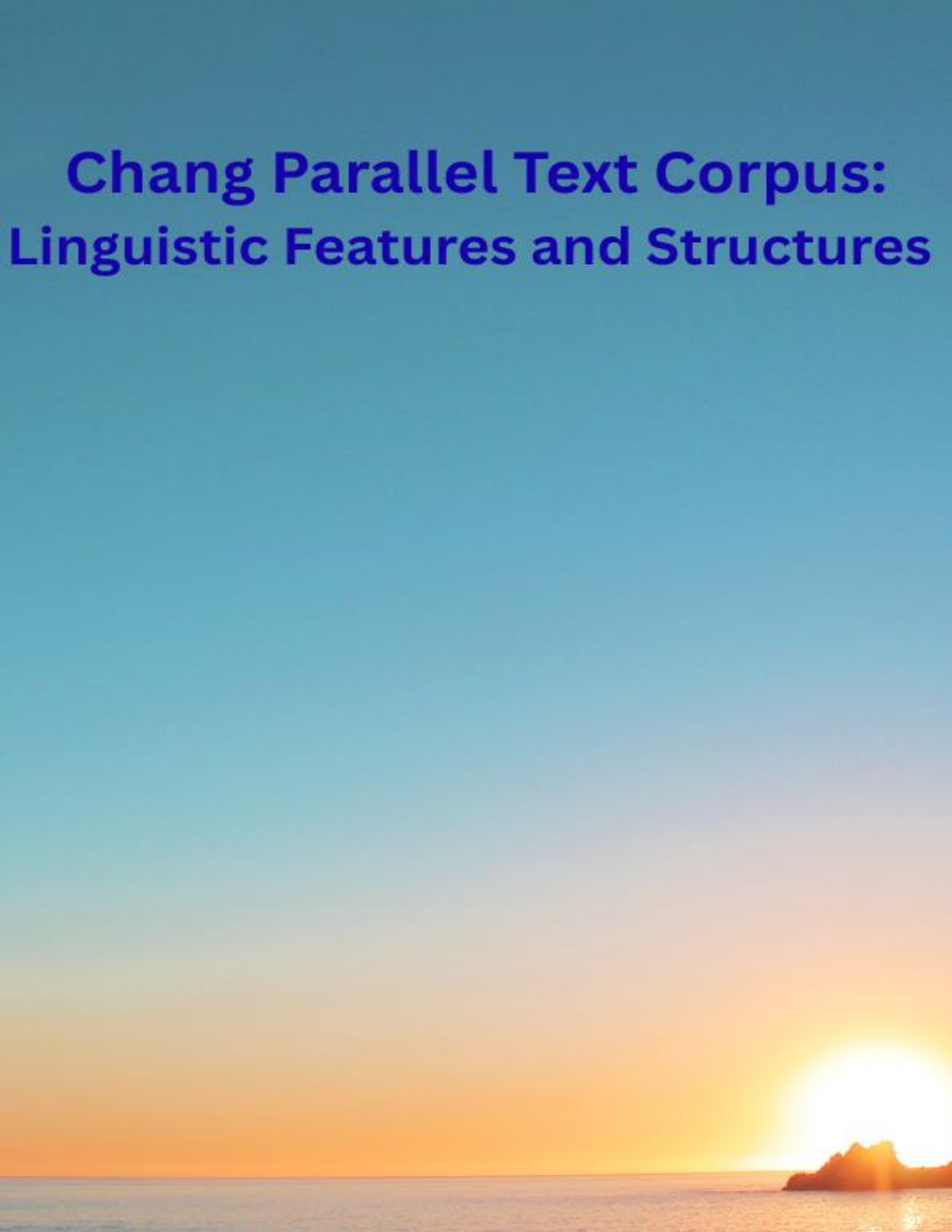


Chang Parallel Text Corpus: Linguistic Features and Structures



CHANG 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.

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CHANG 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 CHANG: A BRIEF INTRODUCTION

Chang language is a Tibeto-Burman language predominantly spoken in the Tuensang district of Nagaland in Northeast India. It is spoken by the Chang Naga community and forms an important part of the linguistic and cultural identity of the region. Chang is recognized as one of the indigenous tribal languages of Nagaland and represents the rich linguistic diversity of Northeast India. Chang belongs to the Sino-Tibetan language family and developed as part of the Naga linguistic group over centuries through oral tradition. Unlike languages with an ancient written history, Chang was primarily transmitted orally, preserving its folklore, songs, myths, and customary laws across generations. With the advent of missionary activity and formal education in the 19th and 20th centuries, the Roman script was adopted to write Chang. The writing system was gradually adapted to represent its specific phonological features.

Chang oral literature is rich and diverse, including folktales, warrior narratives, festival songs, proverbs, and ritual chants. These oral traditions reflect the history, beliefs, and customary practices of the Chang Naga people. In recent decades, written literature in Chang has begun to develop, including translated religious texts, educational materials, and community publications, contributing to the preservation and promotion of the language. Although Chang does not have the long classical written tradition seen in some other Indian languages, it possesses deep historical roots within its community and strong contemporary cultural relevance. The language continues to play a vital role in social interaction, traditional governance, and cultural festivals. Efforts toward documentation, literacy development, and inclusion in educational contexts are helping to strengthen its status and ensure its transmission to future generations.

1.4 CHANG PARALLEL CORPUS

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

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

This Chang 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 Chang parallel Corpus

The Chang 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, Chhattisgarhi, Chirri, 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, Khiemnungan, 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 Chang which are systematically structured based on 159 grammatical categories. Chang has 27641 word count and 160636 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

[1] Rejitha K. S. and Narayan Kumar Choudhary. (ed.). (2025). LDC-IL Corpus Insights. CIIL, Mysore. 978-93- 48633-33-0.