

Bagri Parallel Text Corpus: Linguistic Features and Structures



BAGRI 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. Shalinder Singh

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. Shalinder Singh, Dr. Rejitha K. S., Dr. Narayan Choudhary, Prof. Shailendra Mohan

Contributors: Sukhvinder Kaur, Babbu Kaur

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BAGRI PARALLEL TEXT CORPUS

Shalinder Singh

1.1 LDC-IL PARALLEL TEXT CORPUS

LDC-IL has 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 system, 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 BAGRI: A BRIEF INTRODUCTION

The Bagri language is mainly spoken in the northwestern part of India, especially in the Bagar region. It is widely used in rural areas of Haryana, particularly in districts like Sri Sirsa, Fatehabad and Dabwali, and also in parts of Rajasthan and Punjab. The language is primarily used for everyday communication among local communities, especially in villages. Although Bagri is strong in these regions, many speakers also use Hindi or Punjabi in formal settings such as education, administration, and media.

The Bagri community of India is a culturally rich and historically significant group, primarily associated with the northwestern regions of the country. The term 'Bagri' is used in multiple but related ways—it can refer to a geographical region, a linguistic group, and in some contexts, a social or occupational community. According to the 2011 census report the number of Bagri speakers is 1656588 in India.

1.4 BAGRI PARALLEL CORPUS

The Bagri language is a regional Indo-Aryan variety spoken mainly in northwestern India, particularly in parts of Haryana, Rajasthan, and Punjab. It is generally considered part of the Rajasthani dialect continuum and shares features with neighboring varieties such as Haryanvi and Punjabi. Bagri is primarily a spoken language and plays an important role in the cultural and social life of rural communities.

From a grammatical perspective, Bagri follows the typical structure of Indo-Aryan languages. It has a Subject–Object–Verb (SOV) word order, where the verb usually comes at the end of the sentence. Like many Indo-Aryan languages, Bagri uses postpositions rather than prepositions; these follow the noun or pronoun they relate to. The language has a system of gender (masculine and feminine) and number (singular and plural), and adjectives and verbs often agree with the noun in gender and number. Verbs in Bagri are inflected for tense, aspect, and mood, and auxiliary verbs are used to form complex verb phrases.

Bagri exhibits several distinctive features. In terms of phonology, it includes retroflex consonants and aspirated sounds, which are common in Indo-Aryan languages. There is also variation in pronunciation across regions due to contact with neighboring dialects. The vocabulary of Bagri is largely derived from Rajasthani roots but includes influences from Hindi and Punjabi, especially in modern usage. Many words are related to agriculture, pastoral life, and the local environment, reflecting the traditional lifestyle of its speakers.

Another important linguistic aspect of Bagri is its dialectal variation. The language changes slightly depending on whether it is spoken in Rajasthan, Haryana, or Punjab, with differences in pronunciation, vocabulary, and sometimes grammatical forms. Bagri does not have a fully standardized written form, but when written, it is usually represented in the Devanagari script, and occasionally in Gurmukhi in Punjabi regions.

Overall, the Bagri language is a rich and flexible linguistic system that reflects the history, geography, and culture of its speakers. The above mentioned features contribute to Bagri's uniqueness among the languages of India and highlight its importance in the study of linguistics.

Bagri is a valuable resource for developing parallel text corpora with other Indian mother tongues. This parallel text corpus can serve as a valuable research resource for studying syntactic divergence, morphological richness, code-mixing phenomena, and script variation, which are particularly relevant in multilingual contexts such as India.

1.5 SUMMARY OF BAGRI PARALLEL CORPUS

The Bagri parallel text corpus connected with English and 146 mother tongues of India. Those mother tongues are Anal, Angami, Are, Assamese, Awadhi, Bagheli/Baghel Khandi, Bagri Rajasthani, Balti, Bengali, Bhadrawahi, Bharmauri/Gaddi, Bhojpuri, Bilaspuri Kahluri, Bodo, Brajbhasha, Bundeli/Bundel khandi, Chakru/Chokri, Chambeali/Chamrali, Chang, 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 Bagri which are systematically structured based on 159 grammatical categories. Bagri has 32046 word count and 136098 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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