

SiDIAc-v.2.0: Sinhala Diachronic Corpus Version 2.0

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Abstract

SiDIAc-v.2.0 is the largest comprehensive *Sinhala Diachronic Corpus* to date, covering a period from 1800 CE to 1955 CE in terms of publication dates, and a historical span from the 5th to the 20th century CE in terms of written dates. The corpus consists of 241k words across 185 literary works that underwent thorough filtering, preprocessing, and copyright compliance checks, followed by extensive post-processing. Additionally, a subset of 59 documents totalling 67k words was annotated based on their written dates. Texts from the *National Library of Sri Lanka* were selected from the SiDIAc-v.1.0 non-filtered list, which was digitised using Google Document AI OCR. This was followed by post-processing to correct formatting issues, address code-mixing, include special tokens, and fix malformed tokens. The construction of SiDIAc-v.2.0 was informed by practices from other corpora, such as FarPaHC, SiDIAc-v.1.0, and CCOHA. This was particularly relevant for syntactic annotation and text normalisation strategies, given the shared characteristics of low-resource language status between Faroese and the similar cleaning strategies utilised in CCOHA. This corpus is categorised into two layers based on genres: primary and secondary. The primary categorisation is binary, assigning each book to either Non-Fiction or Fiction. The secondary categorisation is more detailed, grouping texts under specific genres such as Religious, History, Poetry, Language, and Medical. Despite facing challenges due to limited resources, SiDIAc-v.2.0 serves as a comprehensive resource for Sinhala NLP, building upon the work previously done in SiDIAc-v.1.0.

Keywords: Sinhala, Diachronic Corpus, Low-resource Languages

1. Introduction

උගන්නැ සිය බස, මත් වන්නැ එහි රසයෙන්, දකින්නෙහි මහඟු බව, කියා දෙන්න අනුනටත්¹; highlights the cultural reverence for linguistic identity and the enduring significance of one's native language across generations. Languages are constantly evolving, changing over time at all levels of linguistic structure. These changes are influenced by external factors, such as cultural shifts and technological advancements (Alatrash et al., 2020; Blank, 1999; Fromkin et al., 2017). The field of historical or diachronic linguistics focuses on the study and analysis of how languages change over time. In the past two decades, researchers have shown a growing interest in various aspects of diachronic language change. This increased attention can be attributed to technological advances, including the digitisation of historical texts, improvements in computational power, and the availability of large-scale historical corpora specifically designed for diachronic studies (Alatrash et al., 2020; Tahmasebi et al., 2018; Tang, 2018; Bower, 2019).

The Sinhala language is an Indo-European language with a rich and diverse literary heritage that

has developed over several millennia. Its origins can be traced back to between the 3rd and 2nd centuries BCE. Unlike English, which is part of the Germanic branch, Sinhala belongs to the Indo-Aryan branch of the Indo-European language family. The Sinhala language, which is the primary language of the Sinhalese people who constitute the largest ethnic group in the island nation of Sri Lanka, is recognised as the first language (L1) for about 16 million individuals (de Silva, 2025). Furthermore, while English uses the Latin alphabet, Sinhala has its own writing system, which is a descendant of the Indian Brahmi script (Fernando, 1949; De Mel et al., 2025). Sinhala is classified as a lower-resourced language (Category 02) according to the criteria presented by Ranathunga and de Silva (2022).

In this study, we introduce the largest *Sinhala Diachronic Corpus* to date, SiDIAc-v.2.0², which encompasses the period from 1800 CE to 1955 CE based on publication dates, and a range from the 5th century to the 20th century based on written dates. We provide a detailed discussion on the creation of the entire corpus, starting with data collection, preprocessing, and filtration, followed by digitisation and extensive post-processing, and concluding with metadata creation. Additionally, we present an evaluation of both the corpus and the metadata, as well as a century-wise Bag of

¹ **English Meaning:** Learn your mother tongue, be intoxicated by its taste; the preciousness you see in it, enlighten others of - Kumaratunga Munidasa.

Sinhala to IPA Transliteration: ugannæ sija basa, maθ vannæ ehi rasajen, θakinnehi mahangū bawā, kija: θenna anunataθ.

² <https://github.com/NeviduJ/SiDIAc-v.2.0>

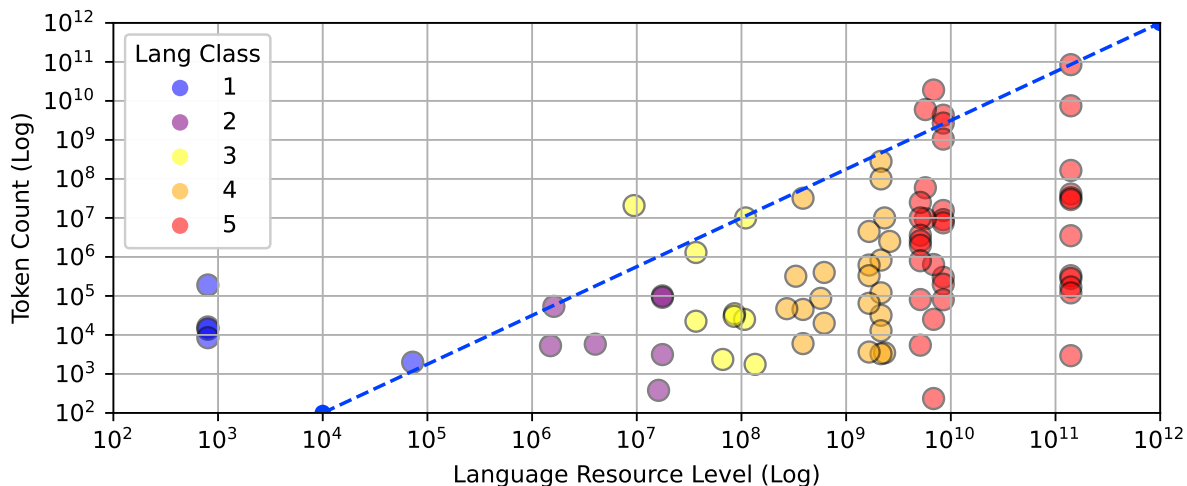


Figure 1: Log token counts of the existing Diachronic corpora against the log of language resource level

Words (BoW) analysis conducted on a subset of SiDIAC-v.2.0.

2. Existing Work

It is important to note that existing corpora vary significantly in size. For example, the *Faroese Parsed Historical Corpus* (FarPaHC) (Rögnvaldsson et al., 2012) contains about 53,000 words, while the *Corpus of Historical American English* (COHA)³ (Davies, 2012) has approximately 400 million words. In contrast, the *Google Books Ngram Corpus*⁴ (Lin et al., 2012) comprises billions of words. The size of a corpus is influenced not only by the textual resources available for a given language, but also by the level and quality of annotation provided within the corpus (Pettersson and Borin, 2022).

In Figure 1, we show the log token counts of 80 existing Diachronic corpora⁵ against the log of language resource level calculated by Ranathunga and de Silva (2022). The language class is also taken from Ranathunga and de Silva (2022), which is based on the initial categorisation of Joshi et al. (2020). We observe that 10^{-2} of the resource level proposed by Ranathunga and de Silva (2022) seems to be the soft-cap for the size of the diachronic corpora for any language class, as shown by the dashed line. Note the extremely low-resourced language *Slavonic* punching way above its weight due to it being included in DIACU (Cassese et al., 2025), PROIEL (Haug and Jøhndal, 2008), and TOROT (Eckhoff and Berdicevskis, 2015). The GNC corpus (Gippert and Tandashvili, 2015) pushes *Georgian* above the line. This uneven resource availability for *Georgian* also reflects

from Ranathunga and de Silva (2022) categorising it as class 3, although by total resource count it is ostensibly in the range of class 2. A comprehensive literature survey, as well as details on all 80 corpora are discussed in Appendix A.

2.1. SiDIAC-v.1.0

The *Sinhala Diachronic Corpus* (SiDIAC-v.1.0) is the first comprehensive diachronic corpus for the Sinhala language, covering a historical period from the 5th to the 20th century CE, specifically from 426 CE to 1944 CE. It comprises 58027 word tokens extracted from 46 literary works (Jayatilleke and de Silva, 2025).

The construction of SiDIAC-v.1.0 involved several detailed steps. First, Sinhala literature was primarily sourced from the *National Library of Sri Lanka*⁶. Next, a rigorous data filtration process was applied, which considered the availability of scanned copies, the accurate determination of written dates (distinct from issue dates), and compliance with Sri Lankan copyright laws⁷. This process reduced the initial selection of 233 identified books down to the final 46.

Text extraction was carried out using Google Document AI⁸ OCR, chosen for its superior real-world accuracy (Jayatilleke and de Silva, 2025b). The OCR technology also demonstrated advanced capabilities, such as text modernisation and morpheme segmentation for historical Sinhala. Although the average OCR accuracy was 96.84%, extensive manual post-processing was conducted by native Sinhala-speaking authors using a human-

³ <https://www.english-corpora.org/coha/>

⁴ <https://books.google.com/ngrams/>

⁵ Details available on Table 3 of Appendix A.

⁶ <https://www.natlib.lk/>

⁷ <https://www.gov.lk/wordpress/wp-content/uploads/2015/03/IntellectualPropertyActNo.36of2003Sectionsr.pdf>

⁸ <https://cloud.google.com/document-ai/>

in-the-loop strategy to correct various formatting issues. These included spacing errors, multi-column text, misplaced words and phrases, paragraph and line indentation issues, and the removal of seals and page numbers. SiDIAC-v.1.0 serves as a foundational resource for Sinhala Natural Language Processing, enabling diachronic linguistic studies.

2.2. COHA & CCOHA

COHA, released in late 2010, is a crucial linguistic resource comprising about 400 million words from over 100000 texts published between the 1810s and 2009 (Davies, 2012). It is genre-balanced across decades to accurately reflect linguistic changes. The construction of COHA involved assembling texts from various archives, scanning books with OCR, and converting over 40000 newspaper PDF files. The corpus was then lemmatised and Part-of-Speech (PoS) tagged using the CLAWS⁹ tagger (Rayson and Garside, 1998).

The downloadable versions of COHA (Davies, 2012) had several limitations, including special ‘@’ tokens that disrupted token flow and obscured sentence boundaries. Issues such as malformed tokens, "NUL" control characters, inconsistent lemmas, incorrect PoS tags, and escaped HTML characters complicated sentence-level Natural Language Processing tasks. To overcome these challenges while preserving core properties, the *Clean Corpus of Historical American English* (CCOHA)¹⁰ was developed through a two-pass cleaning process using Python and NLTK¹¹ (Alatrash et al., 2020).

The first pass addressed initial errors by replacing "NUL" control characters, removing non-word tokens, unescaping HTML characters, unifying lemmas, and marking malformed tokens. The second pass focused on contextual cleaning, tagging and lemmatising tokens using full sentence context and mapping Penn Treebank PoS tags to CLAWS⁷¹² tags for clarity. These extensive cleaning efforts resulted in significant improvements: CCOHA (Alatrash et al., 2020), which contains over 25 million more word tokens and nearly two million more non-word tokens.

3. Limitations of SiDIAC-v.1.0

We have identified several limitations of SiDIAC-v.1.0, some of which were acknowledged by the authors of the corpus (Jayatilleke and de Silva, 2025a). Additionally, we discovered further issues during the analysis, as listed below:

⁹<https://ucrel.lancs.ac.uk/claws/>

¹⁰<https://www.ims.uni-stuttgart.de/forschung/ressourcen/korpora/ccoha/>

¹¹<https://www.nltk.org/>

¹²<https://ucrel.lancs.ac.uk/claws7tags.html>

Data Filtration: Out of the 221 scanned copies acquired for SiDIAC-v.1.0, only 59 had written dates or periods identified. From these 59, 13 were removed to comply with copyright laws, leaving just 46 books. The written dates were annotated based on the lifespans of well-known authors, while the majority of the remaining dates heavily relied on the work of Sannasgala (2015), indicating an over-reliance on a single source. This shows the difficulty in identifying written dates and indicates that the current strict criteria for filtering data may need to be revised to include a broader range of literature.

Malformed Tokens: During the post-processing of SiDIAC-v.1.0, only five formatting issues were addressed: errors in word and character spacing, multi-column text rendering issues, misplaced words and phrases, incorrect paragraph and line indentations, and the removal of seal context and page numbering. However, the most pertinent potential word or character-level identification errors identified from the OCR process were not addressed. These errors can be categorised as spell-correction domain errors, where substitutions, deletions, and insertions of characters and words occurred mainly due to noise in the scanned document, which led to misinterpretations by the OCR engine.

Code-Mixed Data: It was noted that SiDIAC-v.1.0 contains Pali, Sanskrit, and English mixed with Sinhala. Additionally, we identified certain books, such as *Adhimasa Dheepanaya*, which are entirely in Pali. This raises concerns about whether the corpus is fully representative of Sinhala literature.

Commentary Books: In SiDIAC-v.1.0, there are books with titles that include the word "සන්න" (\sanna). These books are commentaries on the previous works. As a result, the textual contents span two different time periods, even though the annotations refer to the original book's date of composition. As an example, for *Sanna sahitha Salalihini Sandeshaya*, the declared written date in SiDIAC-v.1.0 pertains to the original *Salalihini Sandeshaya*; but the majority of the text is in fact commentaries which were written long after the original text.

Poetry Suffixes: The poems in both SiDIAC-v.1.0 and SiDIAC-v.2.0 emphasise rhyming through the use of "ඵලිසමය \ elisamajja" and "ඵලිවැට \ elivætta," where the rhyming sound is isolated or detached from the full word. "ඵලිසමය \ elisamajja" ensures that the rhyme sound at the end of each line, while "ඵලිවැට \ elivætta" highlights this separated sound at the start and/or middle of each line through repetition and character isolation from the related word, enhancing the metrical structure and auditory appeal (Kumara, 2017).

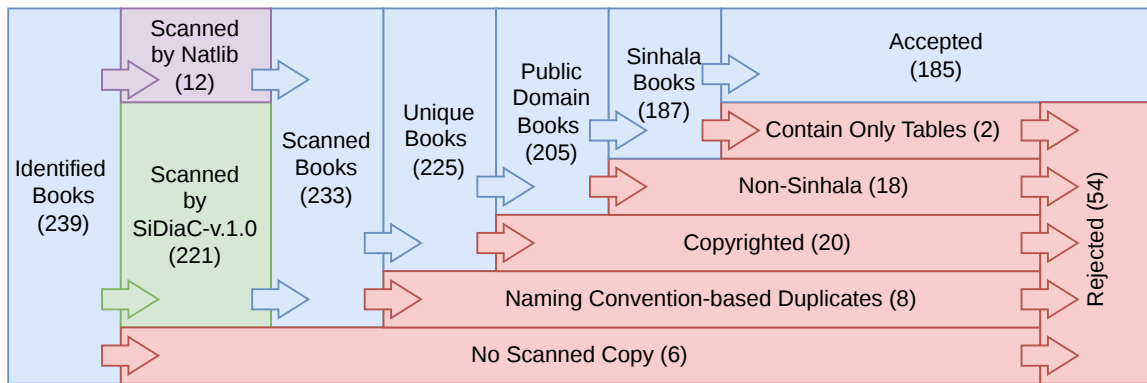


Figure 2: Sequential Data Filtration Procedure

Page Titles: Due to the fact that SiDIAc-v.1.0 was created by only including the initial five to eight pages of literary works, during the analysis of the textual context extracted using OCR, we observed that the first pages usually contain the book title and the chapter title with the main text of the book. Additionally, most pages were found to contain the book name or the chapter name in the header. This title information, which does not hold contextual relevance for the language studies that this corpus enables, was not removed in SiDIAc-v.1.0.

Multi-Column Text: During the post-processing of the text extracted using OCR in SiDIAc-v.1.0, an issue was identified where the OCR engine failed to recognise the two columns separately, resulting in incorrectly rendered text. The proposed solution was to represent the data in a two-column format to replicate the layout of the original books. However, this approach has significant limitations when retrieving information, even from text files. Processing text in this format makes it challenging to effectively separate the two columns for downstream applications.

Content Tables: During our review of the text files in comparison to the corresponding PDF files in SiDIAc-v.1.0, we observed that some content tables attempted to replicate their format by indenting text instead of using line separations. Additionally, letters or words in the table format were recreated in the text content by inserting multiple spaces between them. This structure is not suitable for retrieving information from tables, particularly when working with code scripts.

Footnotes: During our review of the PDF files in SiDIAc-v.1.0, we observed that the inclusion of footer content, such as definitions of terminologies or related information, was common. However, adding these text fragments into a flat text file could disrupt the overall flow, as there are no page separations or footer indicators to contextualise this information, unlike the visual layout found in PDF files.

The limitations identified in SiDIAc-v.1.0 were discussed further, with supporting evidence provided in Appendix B.

4. Methodology

In this section, we will discuss the outline of the procedures implemented in SiDIAc-v.2.0 to address the limitations of SiDIAc-v.1.0. Additionally, we will present the process of expanding the dataset from 46 literary works to 185, utilising careful filtration mechanisms to ensure quality. The complete filtration pipeline is shown in Figure 2.

4.1. Revised Written-Date Filtering

In SiDIAc-v.2.0, significant emphasis was placed on expanding the collection to include more literary works than in SiDIAc-v.1.0. SiDIAc-v.1.0 initially considered 233 unique books, but after undergoing multiple filtration steps, only 46 were finalised to be included in the collection. A crucial step in this process involved applying a written date-based filter, which eliminated 168 out of the original 233 books from the identified literature. However, after examining other diachronic corpora, we realised that the filtration criteria of SiDIAc-v.1.0 were overly strict. While some corpora, such as PROIEL (Haug and Jøhndal, 2008), TOROT (Eckhoff and Berdicevskis, 2015), IcePaHC (Rögnvaldsson et al., 2012), DCS (Hellwig et al., 2020), DACON (O’Neill and Meelen, 2024), LatinISE (McGillivray and Kilgarriff, 2013) do use manuscript (composition) dating, others, such as COHA (Davies, 2012), Royal Society Corpus (RSC) (Kermes et al., 2016), EDGeS (Bouma et al., 2020), ParlAT (Wissik and Pirker, 2018), generally uses the publication year, while COHA also takes into account the authors’ lifespans when applicable. As a result, we decided to adopt a similar approach to COHA for our annotations, enabling us to include a broader range of literary works in SiDIAc-v.2.0.

4.2. Data Preparation for OCR

Initially, we obtained a complete list of 233 books from SiDIAC-v.1.0 (prior to their filtration), which they sourced from the digital library of NatLib. However, upon our initial inspection of these books, we discovered that 8 of them were duplicates listed separately only due to slight differences in the naming of the files. As a result, we were left with 225 unique books.

Afterwards, we renamed the books according to the metadata list, as many had inconsistent file names that made identification difficult (e.g., some had only the first word of the title, others included an identifier number, and some had titles in romanised Sinhala). We then inspected all PDF files to identify any issues that needed to be addressed and found that 12 books had all their pages available. These are the books that NatLib has made openly accessible to anyone through the digital library prior to the creation of SiDIAC-v.1.0. Including all pages of these books would provide us with a larger number of tokens, but this could lead to token bias toward those specific literary sources, as the other remaining books typically only have 5 to 8 pages digitised. Therefore, we decided to include the first 15 pages of these books to maximise the number of tokens while avoiding bias in our corpus.

Furthermore, we identified books that had been scanned with a 90-degree counterclockwise rotation, which had resulted in being excluded from SiDIAC-v.1.0. Additionally, we found that some books have been scanned in a single landscape A4 view, where two portrait pages are scanned into one landscape PDF page, which has resulted in these books to suffer from the multi-column rendering error in SiDIAC-v.1.0 despite not inherently being multi-column books. We cropped and sorted these pages correctly to prevent such issues arising in SiDIAC-v.2.0.

4.3. Copyright and Language Filtration

Copyright laws in Sri Lanka are governed by the Intellectual Property Act No. 36 of 2003⁷. According to this act, copyright protection generally lasts for the lifetime of the author, plus an additional 70 years after their death. In cases where the author is unknown, copyright protection extends for 70 years from the date of first publication. Therefore, we focused on literature by authors who passed away before 1955, as well as works by unknown authors published before that year. After applying this criterion, we had to remove 20 documents from our list.

Following that, we removed documents that contained entirely non-Sinhala text and those that contained only tabular information. The detailed procedures for these filtration steps are outlined in

subsections 4.5.1, 4.5.4, and Appendix B. As a result of this filtration process, we removed a total of 20 documents: 18 that were non-Sinhala and 2 that contained only tables, from the initial set of 205 documents that remained after the naming convention-based duplicates removal, finally resulting in 185 documents.

4.3.1. Written Date Annotation

The issue date of the identified books was clearly indicated in the digital repository at NatLib. However, this does not necessarily mean that the books were actually written during those specified dates. In fact, a book could have been written centuries earlier, while its printed version was released much later. Document dating has become widely recognised in computational sociology and studies within the digital humanities (Ren et al., 2023; Baledent et al., 2020; Hellwig, 2020). Compared to other dating tasks, dating historical texts is more complex due to the lack of explicit temporal indicators (such as time expressions) that would help determine when a document was written (Toner and Han, 2019; Baledent et al., 2020; Hellwig, 2020).

It is evident that text dating or the procedure of annotating the written date of a document is a crucial task in diachronic studies (Ansari et al., 2023; Ren et al., 2023; Favaro et al., 2022). While there are diachronic corpora that retain only the issue date (Gribomont, 2023; He et al., 2014), we conducted a thorough analysis to ensure that the actual written year or possible time period of the books was accurately represented when applicable. A similar approach was adopted in COHA, where they included the author's lifespan when applicable (Davies, 2012).

For the identification process, we used the book by Sannasgala (2015), similar to SiDIAC-v.1.0. We also found a Sinhala dictionary by Soratha Thera (2011) that listed the written periods in centuries of many books used to create the respective dictionary, helping us identify overlaps and anchor certain texts. Furthermore, when applicable, we annotated documents based on the lifespan of the author. However, we could only do this for well-known authors whose information is still present in historical records.

4.4. Text Extraction using OCR

Jayatileke and de Silva (2025b), earlier in the process of creating SiDIAC-v.1.0, noted that both Surya¹³ and Document AI¹⁴ were the best OCR engines in general. However, later in the process, under realistic conditions, Jayatileke and

¹³<https://github.com/VikParuchuri/surya>

¹⁴<https://cloud.google.com/document-ai/>

de Silva (2025a) observed that Document AI demonstrated superior performance compared to Surya, especially supported by the text modernisation and morpheme segmentation capabilities of the former in processing historical Sinhala as shown in Figure 3. Consequently, in this version of the corpus, we have chosen to use Document AI as the OCR engine for text extraction.

Text Modernisation	
උපමාභීවාචක	→ උපමාර්ථවාචක
සිඛාමිතනාචේ	→ සිද්ධාංගනාවෝ
Morpheme Segmentation	
නොවනහෙසින්	→ නොවන හෙසින්
සපුමල්පොකුරක්	→ සපුමල් පොකුරක්
Text Modernisation & Morpheme Segmentation	
සවකීයකර්තාවචනෙසි	→ ස්වකීය කර්තා වචනෙසි
පුඵඤ්චලොපසන්චිච්චි	→ පුඵච ස්චර ලොප සන්චිච්චි

Figure 3: Examples of Sinhala Text Modernisation and Morpheme Segmentation in Document AI.

The methodology used for text extraction with Document AI closely followed the approach outlined in SiDiAC-v.1.0 by Jayatilleke and de Silva (2025a). Document AI is a service offered by Google Cloud Platform (GCP)¹⁵. On this platform, we created a processor and utilised its API key to perform OCR. The processor can handle a maximum of 15 pages at a time; this limitation was also considered when determining our threshold for open-access books in the digital library of Natlib, as discussed in subsection 4.2. Throughout the process, we ensured that we obtained the model confidence for each page of every processed document. We then calculated the average confidence score, which is included in the metadata file of each book folder as discussed in subsection 4.6.

4.5. Post-processing Extracted Text

In this section, we discuss the manual post-processing of text extracted from documents using OCR technology. It was evident that SiDiAC-v.1.0 effectively corrected several formatting issues during their post-processing stage, as discussed in the subsection 2.1. However, there are still many other issues present in this corpus which we identified and discussed in the subsection 3 that need to be corrected.

4.5.1. Handling Code-Mixing in Corpus

As noted by Jayatilleke and de Silva (2025a), the SiDiAC-v.1.0 dataset contains content from San-

skrit, Pali, and English mixed with Sinhala. In this study, we carefully identified and removed all non-Sinhala content from the documents through manual inspection conducted by the authors, who are native Sinhala speakers. The removal of English content was straightforward, as there was very little of it in the entire corpus, and it was written in the Latin alphabet with no need to handle transliteration (De Mel et al., 2025).

As observed by Gair (1996), the Sinhala script is also used for writing Pali and Sanskrit literature in Sri Lanka. But, there are no existing LangID models or even datasets trained to distinguish between the three languages written in the Sinhala script (de Silva, 2025). Therefore, the authors differentiated between Sinhala and non-Sinhala texts using a simple visual negation rule, leading to the removal of 20 non-Sinhala books. These texts mainly contained Pali and Sanskrit *gāthā*¹⁶, *śloka*¹⁷ and *sūtra*¹⁸, with Sinhala explanations and commentaries. This was handled carefully, especially when word-for-word translations were presented in a single block. Such presentations made classification challenging due to the fact that Sinhala has loanwords directly borrowed from these languages that are used unchanged (නන්සම \ θAθsAmmA), as well as terms that have been modified after borrowing but stopping short of being a full calque (නන්භව \ θAθb^hAvA) (Wijesiri et al., 2014).

4.5.2. Inclusion of Special Tokens

CCOHA (Alatrash et al., 2020) utilised a range of special tokens to convey different types of information. One token that stood out to us was the `<end_of_sentence>` (`<eos>`) indicator. This feature enables us to segment the entire corpus into individual sentences, thereby facilitating sentence-level diachronic analysis. Consequently, we adopted this method and inserted "`<eos>`" tokens, based on manual inspections, at the end of all sentences in our corpus. An example block of text with `<eos>` tokens is shown in Figure 4. This manual check is important as the only native Sinhala punctuation mark, කුඤ්චලිය (කුඤ්චලිය \ ku:ndAljA), indicates the end of a text or a full section rather than a single sentence (Jayatilleke and de Silva, 2025a). All other punctuation used in Sinhala for contemporary or otherwise text was borrowed from Western languages during the colonial period (1505-1948) (Kachru and Burchfield, 1994).

It is clear that SiDiAC-v.2.0 includes poetry books, and the issue of poetry suffixes was discussed in section 3. Fundamentally, what this means is

¹⁶ A *gāthā* is a metered verse or stanza within a Buddhist scripture.

¹⁷ A *śloka* is a 32-syllable verse used in the many works of classical Sanskrit literature.

¹⁸ A *sūtra* is a sacred text in Buddhism, comprising a large part of the Buddhist canon.

¹⁵ <https://cloud.google.com/>

එහෙයින් යථෝක්ත මාතෘකාවක් අනුව දැක්විය යුතු කරුණු ද සැකෙවින් පළමුව ප්‍රකාශ කොට අනතුරුව ක්‍රමයෙන් මෙහි දක්වන මාතෘකාවන්ට ඇතුළත් වන කරුණු අනුසාරයෙන්ම දැන යුතු සිංහල භාෂා ඉතිහාසය විෂයයේ අවතරණ ප්‍රවෘත්ති ආදී කථා මාත්‍රයකින් ප්‍රකාශ නොවෙයි.<eos> එහෙයින් සිංහල භාෂාවගේ නියම ඉතිහාසව බොධයට අදාළ වන මූලික කරුණු ද ඇතුළත් වූ මෙම සිංහල භාෂා ඉතිහාසය ආධුනිකයේ සාදරයෙන් කියවා විමසා ප්‍රයෝජන ගනිතිවා.<eos>

Figure 4: An example block of text with <eos> tokens from "Sinhala Bhasha Ithihasaya"

that some Sinhala words appearing in poems have themselves split (sometimes at multiple places) using inserted spaces to better illustrate the rhyming pattern. We wanted to make sure, on one hand, that the words are properly formed for future word-level studies, and on the other hand, that this information on splitting present in the original texts is not lost. To facilitate this, we included a special poetry suffix-shift indicator (<psi>) token, as shown in Figure 5. Note that the inclusion <psi> token was conducted only when words were split, resulting in isolated characters, not when stand-alone words were shifted in a similar manner to illustrate the rhyming patterns. Therefore, any subsequent study that only concerns itself with word-level analysis and not how the original texts were presented may now do so by simply replacing the <psi> token with an empty string.

සා<psi>රු<psi>සං<psi>කස කප්පක්සය පෙරුම්පු<psi>රු<eos>
 සොලසාසං<psi>කස කප්පක්සය පෙරුම්පු<psi>රු<eos>
 සු<psi>චි<psi>සි සං<psi>කස කප්පක්සය පෙරුම්පු<psi>රු<eos>
 මෝ<psi>රු පුබුද මල ලෙස බුදු වූ ලොවිතු<psi>රු<eos>

Figure 5: An example poem with <psi> tokens from "Yasodharaawatha". Note that we have added <eos> tokens at the end of each poem line.

4.5.3. Corrections of Malformed Tokens

The correction process for malformed tokens was extremely challenging and time-consuming, as we had to examine the entire corpus character by character. During this step, we also addressed two formatting errors identified by Jayatilleke and de Silva (2025a) which were closely related to the correction process: misplaced phrases and spacing issues. Tackling these formatting problems simultaneously with the character corrections was more efficient than correcting them separately, as it would have been significantly more time-consuming to traverse the entire corpus multiple times.

4.5.4. Other Post-Processing Steps

The formatting errors noted by SiDIAC-v.1.0 have also been corrected in this corpus. Page numbers and seals were removed, and indentation was standardised to the left, as precise indentation does not

add significant value. Other issues, such as word and character spacing errors and misplaced text, were also addressed. We identified four additional post-processing steps based on the limitations discussed in subsection 3, which we took into account during the procedure.

Commentary Books: This issue was partially addressed when we tackled the code-mixing problem, as most of the original content in the books was primarily in Pali and Sanskrit, with commentaries in Sinhala. For example, the series "Wishudhdhi Margaya - Dhwittheeya Baagaya" was authored by "Buddhaghosa Himi" in Pali during the 5th century, but we anchored its written date to the 13th century to match the Sinhala commentaries, as noted by Sannasgala (2015). In cases like "Sanna sahitha Salalihini Sandheshaya," where both the original and commentary are in Sinhala, we used the original text's date due to the author's anonymity and the varied eras of the commentary writers.

Page Titles & Content Tables: We removed these during manual inspections because they provided contextually irrelevant information. Specifically, the different tables contained information that was difficult to represent effectively, ensuring contextual relevance.

Multi-Column Text: We ensured that the multi-column text is formatted from top to bottom. This means that the content on the left side appears first, followed by the content on the right side, all within a single column. This approach standardises the layout of this content to match the structure of other text files.

Footnotes: While the information in the footer often relates to the main content, it disrupts the flow within the text files of the books. Therefore, we decided to remove it to prioritise information fluency.

4.6. Creation of Metadata Files

This step was based on SiDIAC-v.1.0, which holds comprehensive metadata for a diachronic corpus. Fields in these metadata files are derived from the literature. Each folder, named after a book, contains a text file with the book's textual data and a JSON file with metadata (Jayatilleke and de Silva, 2025a), as shown in Table 1.

The book genres were chosen based on details from Sannasgala (2015) and evaluations by authors of this study who are native Sinhala speakers. The classification¹⁹ occurs at two levels: the primary level divides books into 'Fiction' and 'Non-Fiction,' while the secondary level further categorises them into five classes: religious, history,

¹⁹Table 8 in Appendix D shows the classification of 59 books after the filtering process described in Section 5.

Corpus	Post-Processing	Date-based Filtering	Documents	Total Words	Unique Words	Total Sentences
SiDIAC-v.1.0	V.1.0	✓	46	58027	22837	-
	V.2.0	✓	40	45571	16025	2970
SiDIAC-v.2.0	V.2.0	✗	185	241491	58173	11806
	V.2.0	✓	59	67005	21776	4363

Table 2: Summary of Information in SiDIAC-v.1.0 and SiDIAC-v.2.0.

which has multiple senses; it can mean the number *four*, *skills*, or *thief*, depending on the context. Additionally, the number four carries religious significance. As indicated in Table 9 in Appendix E, words related to *learning* and *education* are visible in the 13th, 16th, 19th, and 20th centuries, with a more distributed frequency over time. The only term associated with the meaning of *thief* appears to be present solely in the 19th century and is noted for its very low frequency. The remaining words with the meanings related to *wisdom* and *knowledge*, *direction*, *value*, and *mathematics* are all connected to the sense of "සතර \sathara" as the number *four*. Given the religious importance of this number, references to hell (found only in the 13th and 15th centuries) and references to knowledge and wisdom (scattered between the 15th and 19th centuries) likely pertain to the four types of wisdom and the four hells in Buddhism.

The second example is the word "මහ \maha," which also has multiple senses. It can signify *esteemed*, *great*, or *sacred*; *powerful* or *strong*; and *big*, *large*, or *massive*. As shown in Table 10 in Appendix E, words related to *great*, *esteemed*, and *sacred* were prevalent during the 13th and 14th centuries. However, their usage declined in the 15th through 19th centuries, before experiencing a resurgence in the 20th century. Words associated with the meanings of *powerful* and *strong* showed relatively low frequency during the 13th and 14th centuries. Their usage was entirely absent from the 15th to the 19th centuries, with no occurrences of associated words. In contrast, the 20th century saw a significant resurgence in the frequency of these words. Additionally, words related to the meanings of *big*, *large*, or *massive* were dominant during the 13th to 15th centuries but appeared to disappear afterwards, only to re-emerge in the 20th century, where they collectively accounted for just two occurrences amongst all related words.

6. Conclusion

SiDIAC-v.2.0 is the largest Sinhala diachronic corpus to date, comprising 241491 word tokens. After filtering for written dates, it contains 67005 word tokens, making it a comprehensive resource for temporal linguistic studies. SiDIAC-v.2.0 will serve as an important corpus for exploring lexical semantic drift by developing diachronic embeddings, tracking neologisms, examining grammatical changes,

conducting historical language modelling, and supporting corpus-based lexicography.

The creation of this corpus involved a meticulous process, which included identifying literature from the NatLib of Sri Lanka through SiDIAC-v.1.0. This was followed by data filtering and preprocessing, written date annotation, text extraction from PDFs, and extensive post-processing. The carefully created metadata files include important information, specifically genre classifications. This classification enables synchronic linguistic studies to focus on specific time periods, adding significant value to the corpus.

The corpus spans the years from 1800 to 1955 CE based on publication dates and from the 5th century to the 20th century CE based on written dates. A thorough analysis of the complete corpus was conducted based on the metadata of all the books, with a comprehensive examination at the word token level. This analysis aimed to identify key findings within the corpus, which were then compared to the only other available Sinhala diachronic corpus, SiDIAC-v.1.0.

7. Limitations

The creation of the SiDIAC-v.2.0 corpus faced various limitations and challenges as listed below.

Written Date Annotation: This process was carried out using the available information from the books by Sannasgala (2015) and Soratha Thera (2011). However, we were only able to complete this for 59 out of 185 books. The task is extremely challenging, as identifying a specific written time period in historical documents is inherently difficult.

Commentary Books: The identified books that primarily include the term 'සන්න \sanna' (meaning commentaries) must feature two written dates: one for the original text and another for the commentary. Although this phenomenon was partially addressed, as mentioned in subsection 4.5.4, a comprehensive approach to dating these texts was not implemented. This is particularly important for identifying the time periods of both the original work and its commentaries, especially when multiple versions of the commentaries exist.

Lexical Annotation: Most of the similar studies on high-resource languages (McGillivray and Kilgarriff, 2013; Rögnvaldsson et al., 2012; Davies, 2012), as well as some low-resource languages (Hellwig et al., 2020), have conducted PoS and other downstream annotations on their corpora. However, we were unable to perform similar lexical annotations for PoS tagging in the SiDiAC-v.2.0 corpus. This limitation is primarily due to the lack of accurate Sinhala PoS taggers available for our use (de Silva, 2025). Consequently, this also precludes us from other downstream lexical annotations for which PoS is a prerequisite, such as dependency parsing (Durrell et al., 2012) and generating tree banks (Hellwig et al., 2020). Moreover, while the text dating process was fully supported by existing resources, as discussed in subsection 4.3.1, the post-processing was carried out by the authors of this study. They followed an iteratively improving set of instructions while working on discrete subsets of documents. Consequently, conducting inter-annotator agreement was not feasible.

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A. Existing Diachronic Corpora

Across the full spectrum of diachronic corpus initiatives, a set of cross-cutting design decisions becomes apparent: depth versus scale, philological precision versus computational efficiency, and standardisation versus historical authenticity. Diverse projects illustrate how corpus-building philosophies have evolved from manually curated, normalised text-bases toward dynamic, monitor-style resources that emphasise scalability and interoperability (Davies, 2002; Zampieri and Becker, 2013; Vaamonde, 2015; Wissik and Pirker, 2018). These transitions map broader epistemological shifts within corpus linguistics and natural language processing (NLP): from human-led lexicography toward automated, model-ready datasets capable of serving more as computational benchmarks rather than traditional linguistic archives.

A central divergence among corpora concerns their treatment of orthographic and morphological variability. Early reference corpora (Davies, 2002, 2009; Onelli et al., 2006) relied on strong normalisation pipelines that maximised searchability but at the expense of variant preservation. Later efforts (Sánchez-Marco et al., 2010; Gelumbeckaitė et al., 2012; Klein and Dipper, 2016) adopt stand-off annotation that separates paleographic and normalised layers, allowing users to switch between authenticity and comparability. This shift may have been a recognition of the fact that orthographic variation is a proxy for diachronic phonology, sociolinguistic practice, and textual transmission rather than mere noise in the dataset. Contreras Seitz (2009) and Vaamonde (2015) embed critical editions within digital environments to preserve variant readings and editorial commentary. Similarly, the Lithuanian corpus (Gelumbeckaitė et al., 2012) uses parallel alignment to source languages, treating normalisation as an interpretive act rather than preprocessing.

On the matter of parallelism, parallel corpora introduced new possibilities for cross-temporal and cross-lingual anchoring. The PROIEL (Haug and Jøhndal, 2008) and TOROT (Eckhoff and Berdicevskis, 2015) treebanks exploit Greek-Slavic alignment to model syntactic diffusion, while the

EDGEs Bible corpus (Bouma et al., 2020) and Old Lithuanian sLiEKkas (Gelumbeckaitė et al., 2012) demonstrate translation-based calibration. Alignment also extends beyond text: embedding-based temporal alignment (Steuer et al., 2024; Gribomont, 2023) synchronises vector spaces across centuries, enabling semantic continuity analysis.

Classical synchronic corpora (Durrell et al., 2012; Geyken et al., 2011; Klein and Dipper, 2016) sought coverage across genres and dialects, whereas later diachronic designs pursued temporal comparability (Kutuzov and Pivovarova, 2021; Rodina and Kutuzov, 2020; Chen et al., 2022). These later works adopt fixed vocabularies or rating scales that allow semantic trajectories to be traced over time without lexical drift in the sample. At the same time, domain-specific corpora such as the *Royal Society Corpus* (Kermes et al., 2016) or the *Austrian parliamentary corpus* (Wissik and Pirker, 2018) redefine balance in sociological rather than statistical terms. The principle of temporal stratification is also visible in Onelli et al. (2006) and Braun (2022), where comparability is anchored by slicing data into socially coherent historical intervals.

Some (Rögnvaldsson et al., 2012; Lavrentiev, 2011; Xue et al., 2005) integrate morphosyntactic detail while maintaining XML or CoNLL interoperability. Others (Sagot et al., 2006; Kopřivová et al., 2014; Favaro et al., 2022) work on the basis of how dictionary alignment and linked data can feed into corpus annotation pipelines. Then, a pragmatic synthesis between linguistic accuracy and NLP scalability achieved through the combination of automatic parsing and manual curation can be seen in some later works (Eide et al., 2016; Eyþórsson et al., 2014; Gifu and Simionescu, 2016). However, even quite recently, work that builds on Universal Dependencies corpora (Scannell, 2022) still prioritises consistent syntax over exhaustive morphology.

ANNIS-based ecosystems (Klein and Dipper, 2016; Hellwig et al., 2020) and CQPWeb deployments (Zampieri and Becker, 2013; Wissik and Pirker, 2018) coexist with emerging RDF and Linked Data graphs (Armaselu et al., 2024). Open pipelines such as Erjavec (2015) and Sánchez-Martínez et al. (2013) provide transparent, reproducible workflows, while Onelli et al. (2006) and Contreras Seitz (2009) show the persistence of regional, non-commercial academic hosting. The infrastructural contrast between reflects differing user communities: *philologists favour manual curation, whereas computational researchers value standardised export formats*.

Diachronic corpora are becoming valuable benchmarks for evaluating NLP rather than just serving as simple repositories of data. The RuSemShift (Rodina and Kutuzov, 2020) and

Dataset	Language		Time Span	Token Count
	Name	Class		
ENGALL (Davies, 2012)	English	5	1800 – 1999	8.50×10^{11}
ENGFIC (Davies, 2012)	English	5	1800 – 1999	7.50×10^{10}
People in the News (Hennig and Wilson, 2020)	English	5	2000 – 2019	1.65×10^9
COHA (Davies, 2012)	English	5	1810 – 2009	4.10×10^8
EDGeS-English (Bouma et al., 2020)	English	5	1301 – 2020	3.28×10^8
English Scientific Writing (Steuer et al., 2024)	English	5	1665 – 1996	2.96×10^8
Royal Society Corpus (RSC) (Kermes et al., 2016)	English	5	1665 – 1869	3.50×10^7
ARCHER (Biber et al., 1994)	English	5	1700 – 1994	3.30×10^6
PPCHE-Modern British English (Kroch et al., 2016)	English	5	1707 – 1914	2.80×10^6
PPCHE- Early Modern English (Kroch et al., 2004)	English	5	1500 – 1720	1.70×10^6
PPCHE-Middle English (Kroch and Taylor, 2000)	English	5	1150 – 1500	1.20×10^6
ISWOC-English (Bech and Eide, 2014)	English	5	400 – 1010	2.94×10^4
GERALL (Schneider and Volk, 1998)	German	5	1800 – 1999	4.30×10^{10}
German Court Decisions (Braun, 2022)	German	5	1970 – 2020	2.70×10^{10}
AMC (Jutta et al., 2013)	German	5	1986 – 2012	1.05×10^{10}
DTA (Geyken et al., 2011)	German	5	1600 – 1899	1.55×10^8
EDGeS-German (Bouma et al., 2020)	German	5	1301 – 2020	9.03×10^7
ParlAT (Wissik and Pirker, 2018)	German	5	1945 – 2017	7.50×10^7
RIDGES (Odebrecht et al., 2017)	German	5	1478 – 1870	3.00×10^6
ReM (Klein and Dipper, 2016)	German	5	1050 – 1350	2.00×10^6
GerManC (Durrell et al., 2012)	German	5	1650 – 1800	8.00×10^5
FREALL (Sagot et al., 2006)	French	5	1800 – 1999	1.90×10^{11}
LLODIA-French (Armaselu et al., 2024)	French	5	1690 – 1918	6.40×10^6
SRCMF (Lavrentiev, 2011)	French	5	800 – 1299	2.51×10^5
ISWOC-French (Bech and Eide, 2014)	French	5	1225 – 1275	2.34×10^3
CHIALI (Xue et al., 2005)	Chinese	5	1950 – 1999	6.00×10^{10}
ZhShiftEval (Chen et al., 2022)	Chinese	5	1953 – 2003	5.93×10^8
People’s Daily (He et al., 2014)	Chinese	5	1947 – 1996	9.60×10^7
CORDE (Shuger, 2020)	Spanish	5	1472 – 1975	2.50×10^8
Corpus del Español (CdE) (Davies, 2002)	Spanish	5	1200 – 1999	1.00×10^8
CorDECh (Contreras Seitz, 2009)	Spanish	5	1500 – 1699	3.60×10^7
EZLN (Gribomont, 2023)	Spanish	5	1952 – 2023	2.60×10^7
IAC-Spanish (Sánchez-Marco et al., 2010)	Spanish	5	1100 – 1599	2.00×10^7
IMPACT-es (Sánchez-Martínez et al., 2013)	Spanish	5	1482 – 1990	8.00×10^6
PS Post Scriptum-Spanish (Vaamonde, 2015)	Spanish	5	1500 – 1800	8.08×10^5
ISWOC-Spanish (Bech and Eide, 2014)	Spanish	5	1221 – 1492	5.47×10^4
EDGeS-Dutch (Bouma et al., 2020)	Dutch	4	1301 – 2020	2.50×10^7
DiaCORIS (Onelli et al., 2006)	Italian	4	1750 – 1945	1.00×10^8
GDLI (Favaro et al., 2022)	Italian	4	1300 – 1999	3.47×10^4
Kubhist (Liljegen, 2018)	Swedish	4	1700 – 1999	2.82×10^9
The Swedish Culturomics Gigaword corpus (Eide et al., 2016)	Swedish	4	1950 – 2015	1.00×10^9
EDGeS-Swedish (Bouma et al., 2020)	Swedish	4	1301 – 2020	8.30×10^6
FSV (Delsing, 2002)	Swedish	4	1276 – 1734	1.20×10^6
Menota-Swedish (Haugen et al., 2008)	Swedish	4	1400 – 1550	3.19×10^5
HaCOSSA (Höder, 2012)	Swedish	4	1375 – 1550	1.28×10^5
MApiR (Språkbanken Text, 2024)	Swedish	4	1200 – 1299	3.30×10^4
CdP (Davies, 2009)	Portuguese	4	1200 – 1900	4.50×10^7
Colonia (Zampieri and Becker, 2013)	Portuguese	4	1500 – 1999	6.20×10^6
TBCHP (Galves et al., 2005)	Portuguese	4	1500 – 1899	3.30×10^6
PS Post Scriptum-Portuguese (Vaamonde, 2015)	Portuguese	4	1500 – 1800	6.48×10^5
ISWOC-Portuguese (Bech and Eide, 2014)	Portuguese	4	1344 – 1400	3.64×10^4
DIAKORP (Kučera et al., 2015)	Czech	4	1300 – 1999	4.00×10^6
DIALEKT (Kopřivová et al., 2014)	Czech	4	1960 – 1989	2.00×10^5
Menota-Norwegian (Haugen et al., 2008)	Norwegian	4	1200 – 1350	8.67×10^5
RuSemShift (Rodina and Kutuzov, 2020)	Russian	4	1682 – 2017	3.20×10^8
RuShiftEval (Kutuzov and Pivovarov, 2021)	Russian	4	1700 – 2016	4.50×10^5
TOROT-Russian (Eckhoff and Berdicevskis, 2015)	Russian	4	1400 – 1699	6.00×10^4
HGDS (Simon, 2014)	Hungarian	4	900 – 1499	3.20×10^6
RoDICA (Gifu and Simionescu, 2016)	Romanian	4	1840 – 1991	4.71×10^5
Menota-Danish (Haugen et al., 2008)	Danish	3	1300 – 1300	1.76×10^4
LLODIA-Hebrew (Armaselu et al., 2024)	Hebrew	3	1000 – 2024	1.00×10^8
PROIEL-Ancient Greek (Haug and Jøhndal, 2008)	Greek	3	0 – 999	2.50×10^5
SLIEKKAS (Gelumbeckaitė et al., 2012)	Lithuanian	3	1500 – 1800	3.50×10^5
IMP-sl (Erjavec, 2015)	Slovene	3	1584 – 1918	3.00×10^5
PROIEL-Armenian (Haug and Jøhndal, 2008)	Armenian	3	400 – 450	2.35×10^4
LatinISE (McGillivray and Kilgarriff, 2013)	Latin	3	-186 – 2000	1.30×10^7
PROIEL-Latin (Haug and Jøhndal, 2008)	Latin	3	300 – 499	2.25×10^5
GNC (Gippert and Tandashvili, 2015)	Georgian	3	400 – 2015	2.07×10^8
IcePaHC (Rögnvaldsson et al., 2012)	Icelandic	2	1100 – 2012	1.00×10^6
Menota-Icelandic (Haugen et al., 2008)	Icelandic	2	1200 – 1700	9.19×10^5
Greinir skáldskapar (Eypórssen et al., 2014)	Icelandic	2	900 – 1270	3.14×10^4
Pre-Standard Irish (Scannell, 2022)	Irish	2	1600 – 1936	3.80×10^3
SiDiaC (Jayatilake and de Silva, 2025a)	Sinhala	2	400 – 1999	5.80×10^4
DCS (Hellwig et al., 2020)	Sanskrit	2	-1300 – -700	5.40×10^5
FarPaHC (Rögnvaldsson et al., 2012)	Faroese	2	1800 – 2012	5.30×10^4
DACon (O’Neill and Meelen, 2024)	Newar	1	1114 – 1899	2.00×10^4
DIACU-Old Church Slavonic (Cassese et al., 2025)	Slavonic	1	800 – 1799	1.91×10^6
TOROT-Old Church Slavonic (Eckhoff and Berdicevskis, 2015)	Slavonic	1	800 – 1099	1.60×10^5
PROIEL-Old Church Slavonic (Haug and Jøhndal, 2008)	Slavonic	1	800 – 1099	1.40×10^5
TOROT-Kiev-era Old East Slavic (Eckhoff and Berdicevskis, 2015)	Slavonic	1	800 – 1250	8.50×10^4

Table 3: Summary of the 80 diachronic corpora surveyed; including and sorted by the language class as defined by [Ranathunga and de Silva \(2022\)](#).

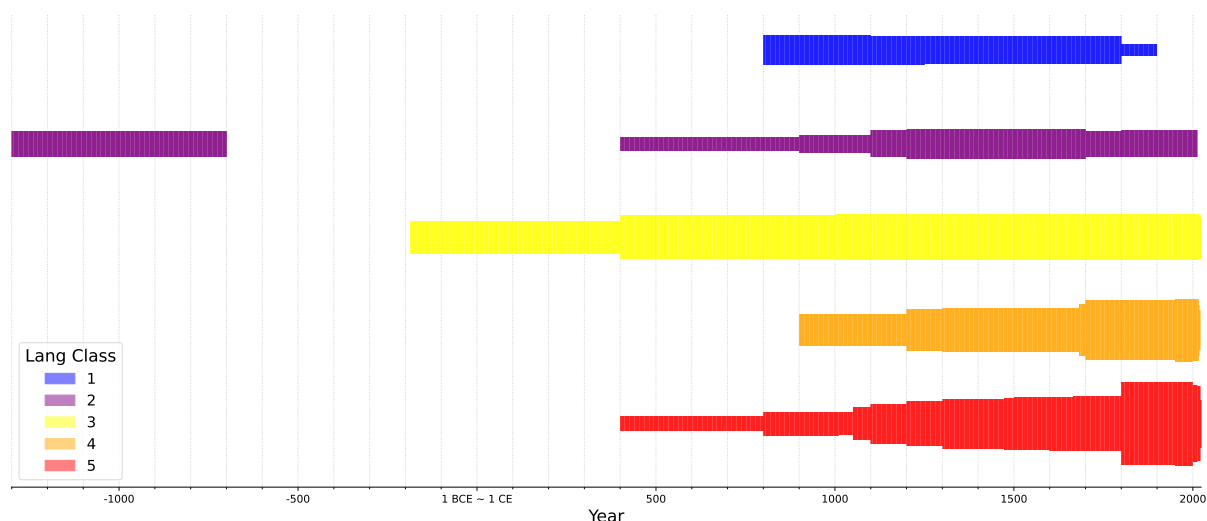


Figure 6: Multi-class timeline of presence and intensity. The visualisation illustrates longitudinal shifts in language class activity, with vertical bar thickness serving as a proxy for rate magnitude.

RuShiftEval (Kutuzov and Pivovarova, 2021) datasets quantify Russian lexical change through human judgments, while Chen et al. (2022) and Cassese et al. (2025) generalise these methods to Chinese and Church Slavonic, respectively. Similarly, Hellwig et al. (2020) and He et al. (2014) link diachronic syntax to compositional semantics via treebank-driven modelling. These benchmarks complete what we observe as the constructive methodological loop: *richly annotated corpora inspire evaluation datasets, which in turn motivate more sophisticated annotation schemes*.

In high-resource languages, having already established ample amounts of general domain corpora, diachronic inquiry has started to broaden (or rather *focus*) into new domains. The *Royal Society Corpus* (Kermes et al., 2016) and long-term scientific surprisal studies (Steuer et al., 2024) capture historical change in scientific prose. Diachronic change is tracked in direct political registers (Wissik and Pirker, 2018) as well as the resultant legal policy reform (Braun, 2022). Media (Braun, 2022), religious translation (Gelumbeckaitė et al., 2012), and even private correspondence (Vaamonde, 2015) are tracked, diversifying textual evidence for everyday and liturgical language.

Linguistic corpora now further intersect with cultural analytics and cognitive modelling. Hybrid projects such as O’Neill and Meelen (2024) combine embeddings with surprisal analysis to chart shifts in scientific discourse; Gribomont (2023) used transformer architectures to measure contextual semantic drift. TEI-encoded multimodal annotation in Gelumbeckaitė et al. (2012) and image-aligned archives in Vaamonde (2015) bridge the continuity between philological and computational paradigms. Cross-linkages between Bouma et al.

(2020) and Armaselu et al. (2024) further reveal a convergence between diachronic linguistics and the semantic web.

To visualise the evolution of language resources, we calculate the Annualised Contribution Rate for each diachronic corpus. By aggregating these annual contributions based on the resource categories proposed by Joshi et al. (2020), we were able to capture the yearly rate of data availability for each category with a uniform chronological distribution assumption applied to each corpus. Since the raw data volumes for high-resource languages are millions of times larger than those for low-resource languages, we applied a base-10 logarithmic transformation to the results. Finally, we cumulatively aggregated these values to visualise the diachronic progression of language resources, illustrating how the proportions of data availability shift across different resource classes over time, as depicted in Figure 6.

When we analyse the yearly rate of data availability for category 1 languages, it becomes evident that data availability begins around 800 CE with the introduction of Slavonic corpora (Cassese et al., 2025; Eckhoff and Berdicevskis, 2015; Haug and Jøhndal, 2008). A slight decline is observed around 1100 CE, attributed to the completion of the *Old Church Slavonic* subsets of the TOROT (Eckhoff and Berdicevskis, 2015) and PROIEL (Haug and Jøhndal, 2008) corpora. This decrease is followed by a minor resurgence in 1114 CE with the initiation of DACON (O’Neill and Meelen, 2024). Another small decline occurs in 1251 CE, linked to the conclusion of the *Kiev-era Old East Slavic* subset of TOROT (Eckhoff and Berdicevskis, 2015). A particularly significant drop in data availability is observed in 1800 CE, resulting from the

completion of the *Old Church Slavonic* subset of DIACU (Cassese et al., 2025), which ultimately leads to a complete absence of data beyond 1900 CE. Similarly, when we analyse category 2 languages from 1300 BCE to 699 BCE, we notice a consistent rate of data availability influenced by DCS (Hellwig et al., 2020). After a complete absence of data in 699 BCE, there is a resurgence in 400 CE with the introduction of SiDIAC-v.1.0 (Jayatilleke and de Silva, 2025a). Multiple spikes in data availability occur until it peaks at 1600 CE, influenced by Pre-Standard Irish (Scannell, 2022), Greinir skáldskapar (Eypórsson et al., 2014), Menota-Icelandic (Haugen et al., 2008), and IcePaHC (Rögnvaldsson et al., 2012). Following this peak, the rate fluctuates with declines until 2013 CE, ultimately leading to a complete absence of data with the conclusion of IcePaHC.

For category 3 languages, data begins to appear around 186 BCE with the introduction of LatinISE (McGillivray and Kilgarriff, 2013). It shows consistent positive growth until 400 CE, when a significant spike occurs with the inception of GNC (Gippert and Tandashvili, 2015) and the *Armenian* subset of PROEIL (Haug and Jøhndal, 2008). Following this, the data fluctuates around a similar rate until 2016 CE, when a sudden drop is observed due to the conclusion of GNC (Gippert and Tandashvili, 2015). Ultimately, the data reaches a complete absence in 2024 CE with the end of the *Hebrew* subset of LLODIA (Armaselu et al., 2024). Furthermore, for category 4 languages, data starts to emerge around 900 CE with the introduction of HGDS (Simon, 2014). There is a noticeable spike in 1200 CE, influenced by the inception of the *Norwegian* subset of Menota (Haugen et al., 2008), and MApIR (Språkbanken Text, 2024). This trend continues with fluctuations until 1700 CE, when another steep spike occurs due to RuShiftEval (Kutuzov and Pivovarova, 2021) and Kubhist (Liljegen, 2018). The data maintains a pattern of stable fluctuations until 2015 CE. From 2015 CE onward, the rate gradually declines due to the conclusions of The Swedish Cultural-omics Gigaword corpus (Eide et al., 2016), RuShiftEval (Kutuzov and Pivovarova, 2021), and RuSemShift (Rodina and Kutuzov, 2020), ultimately reaching a complete absence of data by 2021 CE with the completions of the *Swedish* and *Dutch* subsets of EDGeS (Bouma et al., 2020).

Finally, for category 5 languages, data begins to emerge around 400 CE with the introduction of the *English* subset of the ISWOC. The rates demonstrate a steady increase until 1200 CE. From 1200 CE to 1721 CE, growth continues due to the inclusion of multiple corpora, as indicated in Table 2. A significant spike occurs in 1800 CE with the introduction of the ENGALL (Davies, 2012),

ENGFIC (Davies, 2012), GERALL (Schneider and Volk, 1998), and FREALL (Sagot et al., 2006) corpora. This trend persists, showing only minor fluctuations until 2020 CE, which marks the conclusion of the *German Court Decisions* (Braun, 2022), as well as the *English* and *German* subsets of EDGeS (Bouma et al., 2020). As of 2023 CE, there is a complete absence of data following the conclusion of EZLN (Gribomont, 2023).

Recent advances highlight low-resource diachronic NLP as a central frontier. The resource constraint is mitigated using tailored annotation for Icelandic (Rögnvaldsson et al., 2012; Eypórsson et al., 2014) and Irish (Scannell, 2022). Treebank initiatives adapt dependency parsing to Sanskrit (Hellwig et al., 2020) and Slavic languages (Haug and Jøhndal, 2008; Eckhoff and Berdicevskis, 2015), while Jayatilleke and de Silva (2025a) and Cassese et al. (2025) extend these frameworks to South Asian and Church Slavonic corpora, respectively.

B. Limitations of SiDIAC-v.1.0

During the post-processing of SiDIAC-v.1.0, only five formatting issues were addressed, as detailed in section 3. However, the most significant potential errors related to word or character identification from the OCR process were not addressed. These errors can be identified as spell-correction domain errors (Gunathilake et al., 2025), which involve substitutions, deletions, and insertions of characters and words. Such mistakes primarily occurred due to noise in the scanned documents and visible damage, as these documents are decades or even centuries old. These possibly led to misinterpretations by the OCR engine. Additionally, line breaks that caused words to split were also examined during the post-processing of SiDIAC-v.2.0. A few examples of these issues are included in Figure 7.

It was observed that SiDIAC-v.1.0 includes a mixture of Pali written in Sinhala script, Sanskrit in Sinhala script, and English in Latin script, as illustrated in Figure 8. To ensure that SiDIAC-v.2.0 focuses solely on Sinhala, we removed texts from these three languages using the negation rule discussed in subsection 4.5.1.

The books that have titles including the word "සන්න \sanna" are commentaries on earlier works. Additionally, there are some books, such as "*Wishudhdi Margaya - Dhwithheya Baagaya*" that do not contain this keyword but also provide commentaries. Consequently, the content of these texts may span two different time periods, featuring text from the original work followed by the commentary. An example of this phenomenon can be found in Figure 9. Furthermore, the way in which the SiDIAC-v.2.0 post-processing addressed this issue

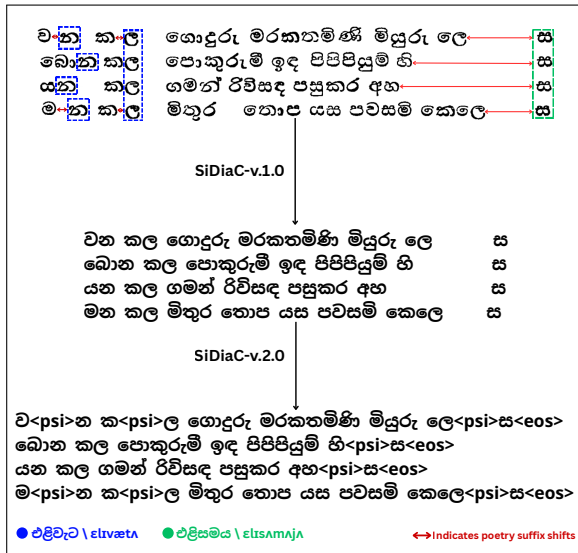


Figure 10: An example of poetic suffix shifts from "Hansa Sandheshaya" and the way SiDiac-v.1.0 and SiDiac-v.2.0 handled them.

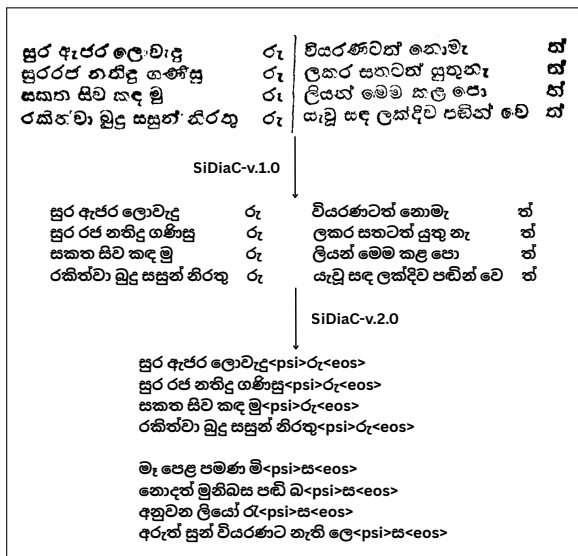


Figure 11: An example of multi-column texts from "Kavya Wajrayudhaya - Palamu Kotasa" and the way SiDiac-v.1.0 and SiDiac-v.2.0 handled them.

these specific phrases are not part of the main content. This inclusion disrupts the flow of the text, as discussed in section 3. Two examples of such footnotes are illustrated in Figure 13. To address this issue in SiDiac-v.2.0, we have identified these text phrases (footnotes) and removed them to prevent any contextual disruption during text processing.

C. Genre Analysis of SiDiac-v.2.0

The genre analysis for SiDiac-v.2.0 was conducted by dividing the published time frame of 1800 CE to 1955 CE into 20-year intervals, starting with

the 1800-1820 bin and concluding with 1940-1955 (note that the dataset does not contain any data from 1955 to 1960 CE due to copyright restrictions as discussed in subsection 4.3). This analysis, based on publication dates and genres, is summarised in Table 4. The results revealed a right skew in the publication counts: only 13 out of 185 documents published between 1800 and 1880 were categorised: 5 in Religious, 4 in Poetry, 3 in Language, and 1 in History. The majority of books were released after 1880. The highest number of publications occurred in the period from 1880 to 1900, which included 63 books categorised under various secondary genres: 34 classified as Religious, 17 as Poetry, 3 as History, 2 as Language, 1 as Medical and 1 Unclassified. Overall, the analysis indicates that 141 of 185 books belong to either Poetry (54) or Religious (86) genres. This predominance may stem from the influences discussed in section 5, particularly concerning the relationship between Buddhism and the impact of Sanskrit Kavya traditions on Sinhala literature.

We conducted genre analysis on SiDiac-v.2.0-filtered, focusing on works written during different centuries. This analysis, which categorises documents by century-wise written dates and genre, is summarised in Table 5. The 20th century contained the largest number of books, totalling 17, with 6 from both the Religious and Poetry genres, 2 each from History and Language and one unclassified. The 13th century followed with 13 books, of which 8 were Religious, and 3 were Language, while History and Poetry had one each. The 5th, 12th, and 16th centuries each had one book categorised as Medical (5th century) and as Poetry (12th and 16th centuries). The 19th century had 10 books, consisting of 4 Religious, 3 Poetry, 2 Language, and 1 History. All other centuries had fewer than 10 documents, with only the 15th century exceeding 5. Interestingly, the percentages of Fiction and Non-Fiction books in both SiDiac-v.2.0 and SiDiac-v.2.0-filtered are similar, at 72.97% and 72.88% for Non-Fiction, respectively.

As acknowledged in section 5, there are five books that were not classified into any secondary genre. These are: 'Hithopadhesha Sannaya' (Issued: 1884, Written: 1825-1905), 'Dhrawya Gunadharpana Sannaya' (Issued: 1900-1920), 'Asabandhi Sabandi' (Issued: 1917), 'Ajuudha Neethiya' (Issued: 1924), and 'Maadhanaa' (Issued: 1917). These books did not fit into any of the categories proposed by Jayatilleke and de Silva (2025a) for SiDiac-v.1.0, and we chose not to introduce new secondary genres only to accommodate just five out of 185 books.

It is important to note that primary and secondary genre classifications are independent. All 185 documents were classified as either 'Non-fiction' or

ඒකවචන.	ද්විවචන.	බහුවචන.	ඒකාකාරී.	එක වචන.	ද්වි වචන.	බහු වචන.	විභක්ති.	
SINGULAR.	DUAL.	PLURAL.	CASES.	කථී.	කථී	කථයා.	{	} NOM.
කථී	කථී	කථයා	{සථිමා- {(සිඤ්ඤා)චී	(භෙ) කථෙ	(භෙ) ක චී	(භෙ) කථයා	{	} VOC.
(භෙ)කථෙ	(භෙ)කථී	(භෙ)කථයා	{සඤ්ඤාචී- {(ආමනනුඤ්ඤ)	කථිමි	කථී	කථිත්	{	} ACC.
කථිමි	කථී	කථිත්	{චිත්තියා- {(කම්කාරක)	කථිතා	කථිතාමි	කථිතා	{	} INST.
කථිතා	කථිතාමි	කථිතා	{නානියා- {(කතාකාරක)	කථියෙ	කථිතාමි	කථිතා	{	} DAT.
කථියෙ	කථිතාමි	කථිතා	{විකුලිචී-(සඤ්ඤා) {(දානාකාරක)	කථො	කථිතාමි	කථිතා	{	} ABL.
කථො	කථිතාමි	කථිතා	{සඤ්ඤා- {(සඤ්ඤා)	කථො	කථිතාමි	කථිතාමි	{	} GEN.
කථො	කථො	කථිතාමි	{සඤ්ඤා- {(සඤ්ඤා)	කථො	කථිතාමි	කථිතාමි	{	} LOC.
කථො	කථො	කථිතාමි	{සඤ්ඤා- {(සඤ්ඤා)	කථො	කථිතාමි	කථිතාමි	{	} LOC.

Figure 12: An example of content tables from "Sanskrutha Shabdhamalawa hewath Sanskrutha Nama Waranagilla" in SiDIAc-v.1.0. Note that the words highlighted in red are malformed tokens.

	Primary Category		Secondary Category					Total
	Fiction	Non-Fiction	History	Language	Medical	Poetry	Religious	
1800 - 1820	1	0	0	0	0	1	0	1
1820 - 1840	0	1	0	1	0	0	0	1
1840 - 1860	2	1	0	0	0	1	2	3
1860 - 1880	2	6	1	2	0	2	3	8
1880 - 1900	12	51	3	7	1	17	34	*62
1900 - 1920	13	27	3	2	3	11	18	*37
1920 - 1940	15	35	6	4	1	17	21	*49
1940 - 1955	5	14	5	1	0	5	8	19
Total	50	135	18	17	5	54	86	185

Table 4: Distribution of Books Across Issued Dates vs Genres in SiDIAc-v.2.0.

*The total count for the secondary category between 1880 - 1900, 1900 - 1920, and 1920 - 1940 CE is 62, 37, and 50, respectively, while the overall number of books in those periods is 63, 40, and 50. This discrepancy arises because the books 'Hithopadhesha Sannaya', 'Dhrawya Gunadharpana Sannaya', 'Asabandhi Sabandi', 'Ajuudha Neethiya' and 'Maadhanaa' were not classified under any of the five secondary categories.

<p>† 1 රුවල්පාදරා, පදර, 2 දුන්නන්තා, 3 රුවන් පාදරා, 4 නිවන් පුරකෙරට. 5 දීමනා, දීමනා, දීමනන්, ජීවමනා. 6 ඉපරාමි, 7 අභිමනන්.</p> <p>* 17. 1 P බුහුමි යා, V බුහුමි අය, 2 M බසව, V සත 3 D බැහ 4 V ඉදුමිති 18. 1 D සුබමාදනි සර සැර, P සරසර, HMTV සිසිරකර 2 V කෙමද. 19. 1 D පෙකෙත 2 D බුමන්. 20. 1 T ලෙලපන් 2 K රුලු 3 D මෙ. 21. 1 D යන් 2 DP කැනවන්, N කැනවන් 3 DN දෙකි, K කරනි 4 D වෙකි 22. 1 M වතනිදු 2 M සුරපුරකො, N සුරපුරකො. 23. 1 P දකනා 2 DN කැරනාම මිදි.</p>
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Figure 13: Examples of footnotes from "†Sadhharma Rathnawaliya - Prathama Bagaya" and "*Hansa Sandheshaya".

'Fiction'. Independently, all 185 documents, except for five books in SiDIAc-v.2.0 and one book in SiDIAc-v.2.0-filtered, were classified in the genres of 'History,' 'Language,' 'Medical,' 'Poetry,' or 'Religious,' as shown in Tables 6 and 7.

D. Metadata Records of SiDIAc-v.2.0

The metadata for each document includes the title in Sinhala, the title in romanised form, the author's name in Sinhala (as indicated in the Digital

Library of Natlib), the author's name in romanised form, genre categorised into primary (binary) and secondary (multi-class) genres, issued date, written date, and the OCR confidence, which is explained further in subsection 4.6. A complete list of metadata information for SiDIAc-v.2.0 can be found in the GitHub²¹ repository, while SiDIAc-v.2.0-filtered is presented in Table 8.

Based on the author counts, we conducted a frequency analysis on both SiDIAc-v.2.0 and SiDIAc-v.2.0-filtered. During this analysis, we identified inconsistencies in the naming conventions of authors, which we standardised for accurate identification of unique counts. It is important to note that some books have multiple authors, with a maximum of three authors per book in SiDIAc-v.2.0. In SiDIAc-v.2.0, we found that out of 185 books, 69 had authors listed as 'Unknown'. The author with the highest number of books was "Munidhasa Kumarathunga", who authored 4 books. Additionally, there were nine more authors who each had

²¹ https://github.com/NeviduJ/SiDIAc-v.2.0/tree/main/Books_PDF#readme

	Primary Category		Secondary Category					Total
	Fiction	Non-Fiction	History	Language	Medical	Poetry	Religious	
5th	0	1	0	0	1	0	0	1
12th	1	0	0	0	0	1	0	1
13th	1	12	1	3	0	1	8	13
14th	2	2	1	0	0	0	3	4
15th	4	4	0	2	0	3	3	8
16th	0	1	0	0	0	1	0	1
18th	0	4	0	1	1	0	2	4
19th	3	7	1	2	0	3	4	10
20th	5	12	2	2	0	6	6	*16
Total	16	43	5	10	2	15	26	59

Table 5: Distribution of Books Across Written Centuries vs Genres in SiDIAC-v.2.0-filtered.

*The total count for the secondary category in the 20th century amounts to 16, while the overall number of books is 17. This discrepancy arises because the book 'Hithopadhesha Sannaya', which offers advice, was not classified under any of the five secondary categories.

	History	Language	Medical	Poetry	Religious	Unclassified	Total
Fiction	2	0	0	41	5	2	50
Non-Fiction	16	17	5	13	81	3	135
Total	18	17	5	54	86	5	185

Table 6: Frequency distribution of books in SiDIAC-v.2.0 categorised by primary and secondary genre classifications.

	History	Language	Medical	Poetry	Religious	Unclassified	Total
Fiction	0	0	0	12	4	0	16
Non-Fiction	5	10	2	3	22	1	43
Total	5	10	2	15	26	1	59

Table 7: Frequency distribution of books in SiDIAC-v.2.0-filtered categorised by primary and secondary genre classifications.

2 books. The remaining 110 authors²² each contributed one book. In SiDIAC-v.2.0-filtered, of the 59 books, 20 had authors listed as 'Unknown'. Once again, the author with the most books was "Munidhasa Kumarathunga" with 4. There were also three authors with 2 books each, while 35 authors each had one book.

E. Bag-of-Words Analysis

Before conducting the diachronic comparison, a cross-century consistency filter was applied. Only target words that appeared in each of the seven centuries under examination (13th–20th century, excluding the 17th as no books were found in that century) were retained for analysis. This was achieved by computing the set intersection of vocabularies across all selected centuries. The resulting set of 80 consistent target words formed the basis for the cross-temporal collocate comparison, ensuring that any differences observed across centuries reflect genuine changes in language use rather than

²²There is an author named "D. H. S. Abayarathna" who has written two books, and another author named "D. H. Stephen Abayarathna". They are likely the same person, but we have kept the names as listed in the Natlib digital library metadata.

gaps caused by limited historical texts from certain periods.

The BoW analysis was conducted with a window span of ± 10 words, as mentioned in section 5. This analysis focused on two words known for their polysemies, based on the dictionary by So-ratha Thera (2011). The two selected words, "සතර \ \sathara" and "මහ \ maha," were consistently present from the 13th to the 20th century in SiDIAC-v.2.0-filtered.

After extracting co-occurrence counts within a ± 10 word window for each century, a longevity score was calculated for each collocate of words "සතර \ \sathara" and "මහ \ maha". This score is determined by multiplying the total co-occurrence count across the corpus by the number of centuries in which the collocate appeared at least once. This measure rewards collocates that are both high-frequency and temporally persistent, providing a data-driven criterion for identifying historically stable lexical associations with the target word.

Next, we sorted the collocates of the two words based on the descending order of longevity scores. We then selected the top 200 collocates and hand-picked those that corresponded to our polysemous senses of "සතර \ \sathara" and "මහ \ maha" for qualitative study. The identified collocates are presented in Tables 9 and 10.

The meanings of collocating words can be related to their associated categories, either directly or indirectly. For example, as illustrated in Table 9, the word "සතර \ \sathara" is linked to the meanings "learn," "thief," "hell," and "wisdom," with all its neighbouring words being directly associated with these meanings. In contrast, the neighbour "ගණ \ gana" is not directly related to the meanings of "value" and "math." However, in a mathematical context, "ගණ \ gana" refers to "groups," which relate to quantities, thereby establishing an indirect connection to the meanings of "value" and "math".

Title	Issued Date	Author	Written Date	Genre		OCR Confidence↑
				Primary	Secondary	
Adhimasa Sangrahawa	1903	Madhampe Dhammathilaka Himi	1850 - 1903	Non-Fiction	Religious	0.969200
Adhimasa Winishchaya	1904	Walikande Sri Sumangala Himi	1850 - 1904	Non-Fiction	Religious	0.997100
Anagathawanshaya: Methe Budu Siriitha	1934	Watadhdhara Medhanandha Himi; Sri Parakumbahu Wligammula Sangaraja Himi	1325 - 1333	Fiction	Religious	0.999200
Ashoka Shilalipi saha Prathimakarana Winishchaya	1919	D. E. Wickramasuriya	1916	Non-Fiction	History	0.998900
Dhaham Sarana	1931	Unknown	1220 - 1293	Fiction	Religious	0.989100
Dhaladha Pujawaliya	1893	Unknown	1325 - 1333	Non-Fiction	History	0.997800
Dhampiya Atuwā Gatapadaya	1932	D.B. Jayathilaka	1868 - 1932	Non-Fiction	Religious	0.924100
Dharma Pradheepikawa hewath Mahabodhiwansha Parikathawa	1906	Unknown	1187 - 1225	Non-Fiction	Religious	0.968200
Dhurwadhi Hardhaya Widharanaya	1899	Sri Dhanudhdharacharya	1854 - 1899	Non-Fiction	Religious	0.991900
Gadaladēni Sannayai Prasidhdha wu Balawathare Purana Wyakyanaya	1877	Hikkaduwe Sri Sumangala Himi	1341 - 1408	Non-Fiction	Language	0.997000
Hansa Sandheshaya	1953	C.E. Godakumbure	1457 - 1465	Fiction	Poetry	0.855300
Hithopadhesha Sannaya	1884	Waligama Sri Sumangala Himi	1825 - 1905	Non-Fiction	-	0.987100
Jaanakeeharana	1891	Sri Kumaaradhaasa	1201 - 1300	Non-Fiction	History	0.997600
Jubili Wamanawa	1887	John de Silva	1857 - 1922	Fiction	Poetry	0.995700
Kathaluweeramanyawaadhaya	1899	Unknown	1899	Non-Fiction	Religious	0.993600
Kavya Wajrayudhaya - Palamu Kotasa	1889	Engalthina Kumari	1825 - 1893	Fiction	Poetry	0.925400
Kavyashekaraya	1872	Thotagamuwe Rahula Himi	1408 - 1491	Fiction	Poetry	0.981300
Kudusika	1894	Unknown	1270 - 1293	Non-Fiction	Poetry	0.998800
Kusajathaka Wiwaranaya (Prathama Bagaya)	1932	Munidhasa Kumarathunga	1887 - 1932	Non-Fiction	Religious	0.970100
Lanka Maathaa	1935	S. Mahinda Himi	1901 - 1951	Fiction	Poetry	0.856700
Liyanora Nadagama	1936	Unknown	1852 - 1927	Fiction	Poetry	0.993500
Mage Mali	1938	G. H Perera	1886 - 1938	Fiction	Poetry	0.865900
Maha Sanya sahitha Wishudhdi Maargaya - Chathurtha Baagaya	1955	Unknown	1266 - 1270	Non-Fiction	Religious	0.974500
Maha Sanya sahitha Wishudhdi Maargaya - Thruthiya Baagaya	1954	Unknown	1266 - 1270	Non-Fiction	Religious	0.968300
Moggallana Panchika Pradeepaya	1896	Unknown	1070 - 1232	Non-Fiction	Language	0.991800
Muwadew da Wiwaranaya	1949	Munidhasa Kumarathunga	1887 - 1944	Non-Fiction	Religious	0.871000
Nidhahase Manthraya	1938	S. Mahinda Himi	1901 - 1938	Non-Fiction	Poetry	0.989700
Nikam Hakiyawa	1941	Munidhasa Kumarathunga	1887 - 1941	Fiction	Poetry	0.893200
Nikaya Sangrahaya hewath Shasanawatharaya	1922	Unknown	1390	Non-Fiction	Religious	0.975400
Okandapala Sannaya hewath Balawathara Liyana Sanna	1888	Don Andhris Silva	1760 - 1778	Non-Fiction	Language	0.988400
Paanadhura waadhaya	1903	P.A. Peris; P.J. Dhies	1873	Non-Fiction	Religious	0.994500
Pansiya Panas Jathaka Potha	1881	Unknown	1303 - 1333	Fiction	Religious	0.998700
Parani Gama	1944	Galpatha Kemanandha Himi	1944	Non-Fiction	History	0.984600
Parawi Sandheshaya	1873	Unknown	1430 - 1440	Fiction	Poetry	0.990200
Ruwanmal Niganituwa hewath Naamarathana Maalawa	1914	Hayaweni Sri Parakramabahu Rajathuma; D.P. de Alwis Wijesekara	1412 - 1467	Non-Fiction	Language	0.966200
Sadhdharma Rathnawaliya - Prathama Bagaya	1930	Dharmasena Himi	1220 - 1293	Non-Fiction	Religious	0.996200
Sanna sahitha Abhisambodhi Alankaraya	1897	Walwita Saranankara Sangaraja Himi	1698 - 1778	Non-Fiction	Religious	0.998900
Sanna sahitha Kawsilumina hewath Kusadhaawatha	1926	Kalikaala Sangeetha Sahithya; Panditha Parakramabaahu Raja; Madugalle Sidhdhartha Himi	1101 - 1200	Fiction	Poetry	0.942400
Sanna sahitha Salalihini Sandheshaya	1859	Unknown	1450	Fiction	Religious	0.990900
Sanskruitha Shabdhamaliwa hewath Sanskrutha Nama Waranagilla	1876	Rathmalane Dharmaloka Himi	1828 - 1887	Non-Fiction	Language	0.967100
Sarartha Sangrahawa: Prathama Bhagaya	1904	Srimadh Budhdhadhasa Rajathuma	398 - 426	Non-Fiction	Medical	0.999700
Sidath Sangaraawa - 1892	1892	J P Amarasinghe	1270 - 1293	Non-Fiction	Language	0.988300
Sidath Sangaraawa - 1954	1892	Pathiraja Piruwan Himi; Ra. Thennakon	1270 - 1293	Non-Fiction	Language	0.988300
Sinhala Upasaka Janaalankaaraya	1914	Unknown	1701 - 1800	Non-Fiction	Religious	0.991000
Sinhala Wyakaranaya enam Sidath Sangarawa	1884	Hikkaduwe Sri Sumangala Himi	1827 - 1911	Non-Fiction	Language	0.988600
Sithiyam sahitha Mahiyangana Warnanawa	1898	Unknown	1878	Fiction	Poetry	0.998900
Sithiyam sahitha Sadhdharmalankaraya	1954	Unknown	1398 - 1410	Non-Fiction	Religious	0.981000
Sithiyam sahitha Sinhala Mahawanshaya	1922	D. H. S. Abayarathna	1874	Non-Fiction	History	0.954900
Sithiyam sahitha Siyabas Maldhama	1894	Kirama Dhammanandha Himi	1820	Fiction	Poetry	0.925600
Tibet Rate Budhdhahama	1897	Hendry S Olkat	1832 - 1907	Non-Fiction	Religious	0.997300
Waidya Chinthamani Baishadhya Sangrahawa	1909	Unknown	1706 - 1739	Non-Fiction	Medical	0.996500
Wibath Maldhama	1906	Kirama Dhammarama Himi	1821	Non-Fiction	Language	0.998600
Wishudhdi Maargaya - Prathama Baagaya - 1949	1949	Unknown	1266 - 1270	Non-Fiction	Religious	0.953900
Wishudhdi Maargaya Brahmawihara Nirdheshathmaka Thruthiya Baagaya	1888	Budhdhagosha Himi; Parakramabahu Rajathuma	1412 - 1467	Non-Fiction	Religious	0.991000
Wishudhdi Margaya - Dhwithheeya Baagaya	1851	Unknown	1266 - 1270	Non-Fiction	Religious	0.994400
Wishudhdi Margaya - Prathama Baagaya - 1897	1897	Budhdhagosha Himi	1266 - 1270	Non-Fiction	Religious	0.994700
Wistharaartha Granthipadha Wiwanaya sahitha Sinhala Wimaanawasthuuprakarana	1925	D.B.K. Gunathilaka; Raajakarunaa Dissanayake	1469 - 1815	Non-Fiction	Religious	0.988200
Wyakaranaya Wiwarana hewath Sinhala Bashawe Wyakaranaya	1937	Munidhasa Kumarathunga	1887 - 1937	Non-Fiction	Language	0.902900
Yoga Rathnaakaraya	1930	Unknown	1501 - 1600	Non-Fiction	Poetry	0.946000

Table 8: The metadata information for the 59 books used in the creation of SiDiAC-v.2.0-filtered.

When examining the word "මහ \ maha," as presented in Table 10, it is evident that the neighbours categorised under the collective meanings of "esteemed," "great," and "sacred" are all directly connected to these terms. On the other hand, the neighbours "අජාත \ adja:sa²³" and "ධර්මාශෝක \ dharmas:ka²⁴," which are the names of well-known kings, are indirectly related to the

meanings of "powerful" and "strong," as kings are typically associated with power. Additionally, the neighbour "කෙලාස \ kaila:sa²⁵," which refers to a mountain, is indirectly connected to the meaning "massive" because mountains in general (and specifically this particular mountain with a religious significance) are considered large.

²³ <https://en.wikipedia.org/wiki/Ajatashatru>

²⁴ <https://en.wikipedia.org/wiki/Ashoka>

²⁵ https://en.wikipedia.org/wiki/Mount_Kailash

Neighbour	Related Meaning(s)	13th	14th	15th	16th	18th	19th	20th
ඉගෙන \ igena	Learn, Educate				2			
සිප් \ sip								2
ගුරෙකු \ gureku								3
ඉගෙන \ igena							1	
සිප්සනරා \ sipsaθara:								1
ශික්ෂාසි \ ʃikʃa:ʃ		1						
විද්‍යාස්ථාන \ viɽja:sθ ^h a:nɒ		1						
ගණ \ gɒnɒ	Value, Math	5					1	
තුන් \ θun		1						1
පංච \ paŋtʃɒ							3	
අටකින්ද \ aɒakimθɒ								1
පණසකින්ද \ paŋasaɒimθɒ								1
සතරක් \ saθaraɒ						1		
දැනගෙන \ dæhægeɒ		Thief						1
අපාය \ aɒa:ja	Hell	1		1				
ඥාන \ dʒ ^h a:nɒ	Wisdom, Knowledge					4		
නුවණ \ nuvaɒɒ						1		
ඥානය \ dʒ ^h a:nɒja				1				
දන් \ θɒθ							1	
දැනගන්ට \ dænaɒgɒntɒ						1		
නැණින් \ næɒɒɒ							1	

Table 9: Frequency Distribution of Neighbour Words for "සතර \ saθara" from the 13th to the 20th Century.

Neighbour	Related Meaning(s)	13th	14th	15th	16th	18th	19th	20th
වහන්සේ \ vaɒhɒnse:	Esteemed, Great, Sacred	1	6				2	2
රහනන් \ raɒhɒnɒn			2				1	4
තෙරුන් \ θeruɒ		1	3				1	
සඟ \ saŋgɒ			2	1				2
වහන්සේගේ \ vaɒhɒnse:ge:		1	3					
ධර්ම \ θ ^h ɒɒɒ		1	1					1
සංඝයා \ saŋg ^h a:ja				2			1	
බුදුන් \ buθun	2						1	
රජ \ raɒɒɒ	Powerful, Strong		1					8
ප්‍රධාන \ praθ ^h a:nɒ		1						1
රජුන් \ raɒɒun								4
ඉසුරු \ isuru		1						1
ඇමැති \ æmæθi								2
රජානනි \ ra:ɒɒa:nɒni								2
රාජගුරු \ ra:ɒɒa:guɒu								2
අණසන් \ aɒɒa:saθ			2					
නරනිඳු \ naɒraɒniθu								2
ධර්මාශෝක \ θ ^h ɒɒɒa:ʃa:kɒ								2
පතිරජ \ paθiɒraɒɒɒ		2						
ලක්ෂයක් \ lakʃɒjaɒ		4	1					1
මහත් \ maɒhɒθ			1	1				
සමූහයක් \ samu:hɒjaɒ			1				1	
මුහුදු \ muθuθɒ	2							
කෙලාස \ keɒla:sa				2				

Table 10: Frequency Distribution of Neighbour Words for "මහ \ maɒhɒ" from the 13th to the 20th Century.