

ESARBICA JOURNAL

**JOURNAL OF THE EASTERN
AND SOUTHERN AFRICA
REGIONAL BRANCH OF THE
INTERNATIONAL COUNCIL ON
ARCHIVES**

**Volume 44
2025**

ISSN 2220-6442 (Print), ISSN 2220-6450 (Online)

<https://dx.doi.org/10.4314/esarjo.v44i1.3>

Leveraging artificial intelligence for ethical archiving and democratising access to sensitive historical narratives

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Received: 3 October 2025

Revised: 17 October 2025

Accepted: 26 November

Abstract

Robust historical documentation is foundational to post-conflict transitional justice efforts, enabling accountability, reconciliation, and societal healing. Zimbabwe's experience following the Gukurahundi period (1983–1987), a conflict involving significant civilian casualties, particularly among Ndebele communities in Matabeleland and the Midlands, highlights critical challenges in archiving sensitive histories. Constraints in accessing fragmented, incomplete, or vulnerable records, alongside limited participatory frameworks for historical testimony, impede inclusive truth-telling and community engagement in national healing processes. Artificial intelligence (AI) offers transformative potential to address these archival limitations by enabling large-scale data aggregation, automated anonymisation of sensitive testimonies, and secure decentralised storage. Such methodologies democratise historical preservation, ensuring ethical documentation even in contexts where traditional archival systems face structural challenges. As such, this study sought to address Zimbabwe's archival asymmetry by co-designing, with stakeholders, a prototype digital AI-driven archive that prioritises data sovereignty and intersectional inclusivity. A transdisciplinary and participatory action research (PAR) approach structured across three key phases, which include stakeholder mapping and needs assessment, co-design workshops, and prototype development and testing, was employed. The study was the first in Zimbabwe to build a co-designed, AI-driven digital archive specifically tailored to a politically charged historical context, offering a new paradigm for ethically managing post-conflict records.

Keywords: Transitional justice, historical documentation, digital archives, artificial intelligence (AI), gukurahundi, Zimbabwe, participatory action research, data sovereignty, archival asymmetry

Introduction and background to the study

The accessibility of historical records is paramount for societies navigating the aftermath of mass violence. As Hayner (2011) asserts, sound documentation forms the foundation upon

which transitional justice efforts and mechanisms such as truth commissions, restitutions, and institutional reforms are built. Zimbabwe's route following the Gukurahundi conflict characterises the deep complications inherent in documenting politically sensitive histories where official records are scarce, contested, or suppressed (Ndlovu-Gatsheni, 2003; Eppel, 2004; Ndlovu, 2018;). Such archival asymmetries, characterised by fragmented and often inaccessible records, significantly hinder inclusive truth-telling and meaningful community-led dialogues in national healing initiatives (Ndlovu-Gatsheni, 2003; Matsika, 2017; Ngwenya, 2020; Alexander, 2021). Subsequently, the narratives central to victim and survivor communities remain marginalised within the national historical consciousness. New technologies, mainly artificial intelligence (AI), present unique opportunities to overcome these archival disparities. AI capabilities such as large-scale data processing, automated anonymisation, pattern recognition, and enabling composite searches provides potential solutions for not only aggregating but also preserving, and ethically managing vast quantities of sensitive historical material (Duff et al., 2018; Bakibinga, Vinck & Nsangi, 2020; Ismaeil 2025). This paper details a study that leveraged the use of AI potentials, adopting a co-design methodology to develop a prototype AI-driven digital archive specifically tailored to address the archival gaps surrounding the Gukurahundi period in Zimbabwe. The primary purpose was to create a survivor-centric and accessible platform prioritising ethical considerations and community agency in historical preservation.

Archival asymmetry and post-conflict documentation in Zimbabwe

The period following Zimbabwe's independence in 1980 witnessed significant civilian suffering in the Matabeleland and Midlands regions (Vambe, 2012; Ndlovu, 2018; Ndlovu, 2021). An accurate and inclusive history of Gukurahundi remains intensely abstract largely due to the critical absence of accessible, verifiable, and systematically collected records from the period itself. However, estimations suggest that over 20 000 people were killed during the period 1983 to 1987 (Ncube & Siziba, 2015; Mpofu, 2021). Traditional archival institutions in Zimbabwe, often under-resourced and entangled in political histories, have struggled to fully implement such participatory frameworks for politically contentious events such as the Gukurahundi conflicts. In their writings, McGregor and Ranger (2000) argue that the messy nature of the early post-independence years of such regional conflicts created archival asymmetries where formal, contemporaneous documentation was minimal or non-existent. This fundamental dearth of primary source records created an instant and continuing complication to establishing an accurate historical framework. Archival asymmetry describes the power disparities inherent within historical record keeping, especially in post-conflict areas (Eppel, 2004; Harris & Verne, 2021). Traditional archives often reflect state-centric narratives, while records held by marginalised communities or documenting state violence are frequently dispersed, endangered, or actively destroyed (Confino, 1997; Jimerson, 2003; Cosson, 2017). The case of the Gukurahundi in Zimbabwe exemplifies such archival asymmetries. For example, research by the Catholic Commission for Justice and Peace in Zimbabwe (Catholic Commission for Justice and Peace in Zimbabwe (CCJP), 1997) provided critical early documentation of the Gukurahundi genocide, yet access to official state-held records remains relatively restricted (Raftopoulos, 2009; Bvirindi, Landa & Chidarikire, 2024). The available individual and community-held testimonies, personal manuscripts, photographs, and reports by Private Voluntary Organisations (PVOs) are often fragmented, physically vulnerable, and, most importantly, lacking centralisation and secure preservation (Matsika, 2017; Ndlovu, 2018; Mashingaidze, 2020). These asymmetries have not only impeded historical research and

Leveraging artificial intelligence for ethical archiving

advancement of scholarship but they have also denied communities control over their own narratives.

Problem statement

Robust historical documentation of the Gukurahundi 1983–1987 genocide in Zimbabwe is critically impeded by systemic archival asymmetries, fragmentation of community-held records, and exclusionary preservation practices. As evidenced by scholars (CCJP, 1997; Matsika, 2017; Sibanda, 2021), the scarcity of accessible official records, coupled with the physical degradation of survivor-collected manuscripts, has obstructed transitional justice processes. Grassroots documentation efforts by survivors, PVOs, and researchers remain fragmented and vulnerable to loss (Ndlovu, 2018; Mpofu, 2021). Concurrently, traditional state-centric archival institutions fail to address intersectional inclusivity, data sovereignty, and trauma-informed ethical protocols essential for community trust. This gap necessitates an innovative approach to leverage AI-driven solutions that ensure survivor-centred control, and safeguard vulnerable histories against erasure.

Purpose of the study

The study sought to co-design a prototype digital AI-driven archive that prioritises participatory ethics, data sovereignty, and intersectional inclusivity.

Originality

This study was the first in Zimbabwe to propose a co-designed, AI-driven digital archive specifically tailored to a politically charged historical context, offering a new paradigm for ethically managing post-conflict records and archives. It contributes to global debates on ethical AI use first in records and archives management and transitional justice efforts, particularly where surveillance, state control, and digital repression concerns persist. Prioritising community-led data sovereignty, the research puts community-driven documentation at the forefront and empowers survivors to decide how their histories are preserved. Furthermore, the design framework may be scalable to other jurisdictions' societies that desire to democratise memory and justice through responsible AI adoption.

Participatory archives and ethical imperatives

The importance of participatory archival models has become particularly acute when confronting histories of mass violence such as the Gukurahundi 1983-1987 genocide in Zimbabwe. This is especially true considering that traditional, state-led archives inherently struggle to provide access to the complex and often muzzled narratives of victimised communities, particularly when the state itself is implicated in the violence (Mathuthu, 2021; Mpofu, 2021; Sibanda, 2021). Furthermore, traditional archival institutions themselves may be entangled in the political histories, which may lead them to institutional caution, restricted access policies, or an inability to gain the trust of affected communities. Therefore, scholars have increasingly advocated for participatory records and archival models that shift power to communities by appreciating them as active agents rather than passive subjects of documentation (Cook, 2013; Caswell, 2014; Hurley, 2016; Ngoepe & Saurombe, 2016; Moles, 2021; Sibanda, 2021). Caswell (2014) further argues that diverting documentation power to communities is a necessity for historical justice. This is especially valid in the context of Gukurahundi, where official records are scarce, suppressed, or actively contested (CCJP, 1997;

Raftopoulos, 2009; Mpofu, 2021; Sibanda, 2021). A participatory approach empowers communities to define what is worth preserving, how it should be interpreted, and who controls access, directly countering the archival asymmetry that has historically marginalised their experiences within the national narrative (Ndlovu-Gatsheni, 2003). These efforts further transform archives from static repositories into dynamic spaces for community-led truth-telling and reclaiming historical authority.

Harris and Verne (2021) highlight the need for ethical considerations, consent, privacy, and cultural protocols to be taken into consideration. For example, the risk of re-traumatisation during primary testimony collection or subsequent archive use is an essential concern. Therefore, ethical archival practice in such cases only requires not only culturally sensitive data collection strategies but also the assimilation of psychological support frameworks (Harris & Verne, 2021). Furthermore, comprehensive community-led archival practices must be conscious of vulnerabilities based on gender, age, disability, ethnicity, and socio-economic status within affected communities (Ketelaar, 2017). Harris and Verne (2021) also emphasise that documenting sensitive histories demands meticulous attention to consent processes that are truly informed, ongoing, and allow for withdrawal; robust privacy protections that safeguard contributors from potential reprisals, especially in a still-politically charged environment.

Gukurahundi documentation and persistent challenges

Survivor groups, independent researchers, and PVOs have often taken the lead in documenting the Gukurahundi genocide in Zimbabwe (Matsika, 2017; Mathuthu, 2021; Mpofu, 2021; Sibanda, 2021), but their efforts have often faced challenges of fragmentation, physical vulnerability of materials, and a lack of sustainable, secure preservation infrastructure (Matsika, 2017; Sibanda, 2021). The personal narratives, especially by victims with lived experiences, are often shared within trusted spaces for fear of victimisation (CCJP, 1997; Matsika, 2017; Mathuthu, 2021; Mpofu, 2021; Sibanda, 2021). Sibanda (2021) further highlights that traditional leaders and the elderly community members, as custodians of community memory, have tried to pass down the history of the Gukurahundi genocide using oral methods, such as songs and storytelling. PVO groups and faith-based organisations, such as Ibhetshu likaZulu, the Center for Innovation and Technology, Heal Zimbabwe Trust (HZZT) and CCJP, have made efforts to collect testimonies through structured interviews and community meetings. It is worth noting that despite the indispensable efforts, the fragility and fragmentation of the documentation efforts still underscore an urgent intervention. Significant gaps still exist in terms of ubiquitous access to records. For example, collected records still exist in scattered silos, such as PVO filing cabinets, individual notes, personal digital devices, and, in some cases, unpublished research transcripts (Matsika, 2017; Mathuthu, 2021; Mpofu, 2021; Sibanda, 2021). The lack of effective preservation strategies for paper records still exists, which has resulted in some records being damaged (Moyo, 2021; Sibanda, 2021).

Artificial intelligence: improving documentation and access

Document aggregation

Leveraging artificial intelligence for ethical archiving

AI offers transformative possibilities for improving archival administration, in particular, the documentation and accessibility of historical records within contested areas (Felicati, 2023; Rolan et al., 2018; Tsabedze, 2023; Mutsagondo, 2025). This is also true in areas that are characterised by fragmentation, volume, and sensitivity (Felicati, 2023; Mutsagondo, 2025). One key capability of AI technology lies in overcoming traditional barriers to records aggregation and processing (Harris & Verne, 2021; Tsabedze, 2023; Mutsagondo, 2025). AI algorithms, particularly in machine learning (ML) and natural language processing (NLP), can effectively ingest, structure, and link vast quantities of disparate records and, at the same time, provide meaning to the records (Rolan et al., 2018; Felicati, 2023). In the case of siloed Gukurahundi records, AI can be trained not only to process the vast amount of data but also to provide a timeline series analysis of events, subsequently giving more meaning to the records.

Document preservation and restoration

The physical degradation of existing Gukurahundi manuscripts poses a critical threat to historical accountability. As Sibanda (2021) documents, many surviving records, including handwritten victim manuscripts, church registers, and PVO field notes, have suffered extensive damage due to inadequate storage conditions, environmental exposure and inherent material fragility. In such cases, Optical Character Recognition (OCR), enhanced by AI, can extract text from these faded or damaged physical documents with greater accuracy than traditional preservation and restoration measures (Marinai, Gori & Soda, 2005; Bannigidad & Gudada, 2017). In their research, Marinai et al. (2005) established that ML algorithms can be trained to interpret various complex, noisy, irregular manuscripts and damaged historical documents. Modules such as adaptive image pre-processing, context-aware recognition and handwriting model training may play a key role in the preservation and restoration of Gukurahundi records.

Increased document accessibility

Advanced search functionalities powered by AI transcend beyond simple keyword matching (Rolan et al., 2018; Felicati, 2023). For example, semantic search engines without AI extension capabilities only understand the contextual meaning of queries, while AI-powered ML algorithms can uncover complex patterns, connections, and anomalies across massive datasets that might escape human researchers (Weber, Chen & Liu, 2018). Natural Language Processing (NLP) techniques can automatically transcribe oral history interviews, translate content, and generate descriptive metadata and themes within unstructured text (Manovich, 2013; Weber et al., 2018). This automation will accelerate the searchability and access to digital collections from previously siloed or inaccessible records (Weber et al., 2018; Rolan et al., 2018; Felicati, 2023). Furthermore, NLP translation capabilities may be used to allow for translation of records into various local languages. This promotes wide access to the records by diverse users. Furthermore, AI can cluster related testimonies based on described events or locations, and suggest relevant materials a user might not have considered. Research has also shown that information consumption levels of people are usually low; as such, AI poses advantages by generating summaries of lengthy documents or audio files to aid navigation and comprehension (Duff et al., 2018). These capabilities make archives significantly more usable

and insightful for diverse stakeholders, from survivors seeking specific information to scholars conducting complex historical analysis, democratising access to complex historical corpora.

User anonymisation and security

AI provides solutions for managing the ethical complexities inherent in sensitive records and archives (Harris & Verne, 2021; Feliciati, 2023). Automated anonymisation techniques like Named Entity Recognition (NER) may efficiently hide personally identifiable information from text documents and transcripts before human review (Bade, Kolesnikova & Oropeza, 2024). This significantly reduces the risk of re-identification and harm to contributors, especially in cases of Gukurahundi, where victimisation of people with primary data has been recorded (Ndlovu, 2018). Moreover, AI-driven security systems can monitor access patterns for anomalies, enhancing protection against unauthorised data breaches (Jobin, Lenca & Vayena, 2019). It is essential to highlight that the implementation of these AI tools must be guided by robust ethical frameworks developed through participatory processes (Harris & Verne, 2021). When embedded within community-centred governance models emphasising data sovereignty, AI becomes a powerful enabler for secure, ethical, and meaningful access to historically marginalised narratives (Caswell, 2014).

Ethical considerations

To ensure the project was conducted in an ethical manner, the researchers sought informed consent from all the study's participants. Memoranda of understanding (MoU) were signed with all participating CSOs. This also allowed for the distribution of project ownership to various stakeholders. Furthermore, a trauma support consultancy firm was engaged to provide psychological support during the data collection periods for survivors. All participants were given consent forms to sign before data collection.

Methods

This study employed a qualitative research approach, which allowed an understanding of the complex socio-political, historical, and ethical dimensions surrounding the documentation and preservation of Gukurahundi-related materials. Furthermore, given the sensitive nature of the subject matter and the contextual nuances embedded in community memory, trauma, and historical erasure, a qualitative methodology was best suited to elicit rich, contextualised, and nuanced data. The research was further anchored on the transdisciplinary Participatory Action Research (PAR) framework (Krimerman, 2001; Mercier, 2022), which was operationalised over a 12-month period in three iterative phases, including diagnostic, co-design, and implementation. This approach was deliberately chosen to foster meaningful collaboration between researchers, affected communities, survivors, archivists, human rights practitioners, and AI specialists. By engaging stakeholders as co-researchers rather than subjects, the study ensured shared ownership of both the process and the outcomes. This methodology further aligns with the goals of transitional justice, emphasising survivor agency, participatory truth-telling and local ownership of memory work (Autesserre, 2012; Gready & Robins, 2014; Bowen & Murshid, 2016).

Leveraging artificial intelligence for ethical archiving

The PAR framework was transdisciplinary, integrating insights from archival science, transitional justice, AI ethics, and indigenous or community epistemologies to holistically address the systemic issue of archival asymmetry in Zimbabwe. This blending of disciplines was critical in designing an archival intervention that is ethically sound, technologically relevant, and epistemologically inclusive. The methodology explicitly challenged controlled narratives by centring subaltern voices and reclaiming indigenous modes of knowledge production and preservation. Additionally, the framework adopted a survivor-centric design ethos (Caswell, 2014), which emphasises ethical listening, community-led knowledge governance, and the mitigation of re-traumatisation during the research and design process. To ensure ethical rigour and community trust, the study operationalised principles of data sovereignty, intersectional inclusivity, and trauma-informed research ethics. Data sovereignty was particularly critical given the political sensitivities and historical state surveillance associated with Gukurahundi. Communities maintained control over how their stories, documents, and testimonies were collected, stored, and disseminated.

Data collection relied on open-ended interviews and document reviews, chosen for their flexibility and depth. Open-ended interviews allowed participants, especially survivors and community elders, to articulate their experiences in their own terms and at their own pace, facilitating the emergence of emic perspectives. These interviews were complemented by document reviews of state records, NGO reports, and oral histories to triangulate findings and expose archival silences, gaps, or distortions. In summary, the methodological choices reflect a deliberate ethical and epistemic commitment to repairing archival injustice and enabling survivor-led transitional justice, while also engaging AI and archival technologies in ways that respect community autonomy and historical truth.

Objective 1: To identify stakeholders and co-design the archival challenges

Stakeholder identification and snowballing sampling

To achieve the first objective, the researchers first identified potential project stakeholders using purposive sampling and snowball sampling to accommodate intersectional representation. Due to the sensitive nature of the Gukurahundi genocide, Civil Society Organisations (CSOs) usually work silently, hence the researcher had to rely on snowballing in mapping out other stakeholders. The mapped stakeholders included survivor groups, CSOs, traditional leaders, and academic experts (see Table 1.1). This foundational stage established a co-owned understanding of needs, vulnerabilities, and contextual constraints to inform subsequent co-design.

Table 1.1: Mapped stakeholders

Designation	Actual sample	accessed	Justification	Data collection method
Civil society organisation	13		Work with Gukurahundi victims	Interviews
Traditional leaders	5		Successfully interviewed the CNO	Interview
Survivors	33		They have lived experiences	Interviews
Academic experts	9		Conducted and published research on Gukurahundi	Interviews
Total	60			

Data collection methods

The researchers employed a multiple-method data collection strategy to ensure triangulation, enrich data depth, and capture a wide spectrum of perspectives on the archival silences and transitional justice dynamics surrounding the phenomenon under study. Semi-structured interviews were conducted with 13 representatives from CSOs across Zimbabwe, five traditional leaders, and nine academic experts. These interviews provided flexibility for participants to share detailed narratives while allowing the researchers to probe key themes related to archival access, community memory, and justice mechanisms. Furthermore, focus group interviews were carried out with 33 survivors across Bulawayo, Gwanda, Lupane, and Tsholotsho, regions deeply affected by Gukurahundi. To complement these oral testimonies, a document audit or analysis was conducted on fragmented archival sources, including organisational reports, research papers, personal manuscripts, and audio-visual documentaries. This method facilitated contextual analysis, exposed archival gaps, and supported the triangulation of survivor narratives with existing written and visual records, thereby strengthening the validity and historical breadth of the study's findings.

Objective 2: To collaboratively design ethical AI archival principles and functionalities

To achieve the second objective of the study, the researchers undertook systematic participatory workshops with the study's participants. Design thinking activities allowed for the mapping of survivor interactions with archives and personal development for marginalised users such as elders, low literacy users, and language differences.

Objective 3: To build and iteratively validate a minimum viable product

The third objective of the study was to build a minimum viable product in the form of an AI-powered digital archive platform. The platform was named "Truthive", which is a combination of truth and archive (see Figure 1).

Leveraging artificial intelligence for ethical archiving

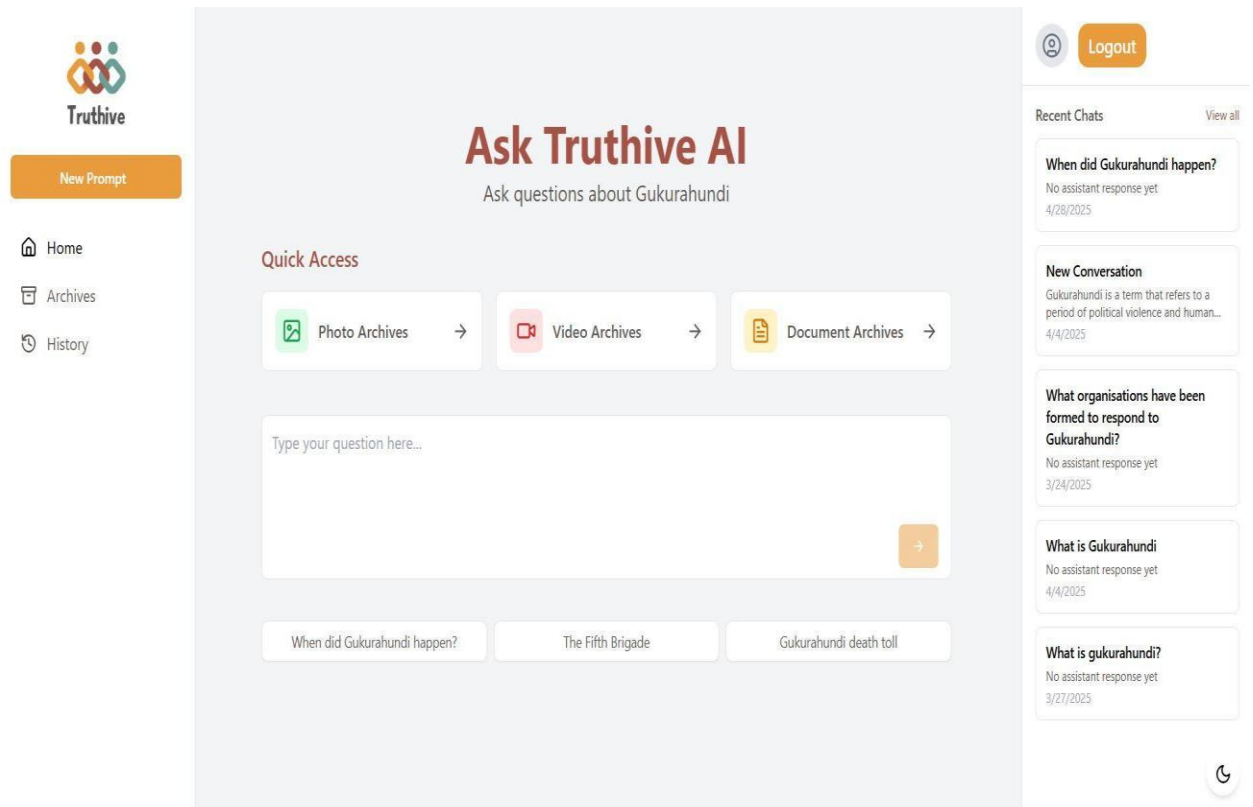


Figure 1: Screenshot of the Truthive user interface (Source: Truthive, 2025)

Accessibility is not only a technical requirement but also a human rights imperative (Wentz et al., 2020). As such, for the frontend, design Svelte and SvelteKit, with full compliance with WCAG 2.1 accessibility standards, was used as a deliberate choice that enhanced both inclusivity and usability. This was especially important given the historical marginalisation of communities affected by Gukurahundi. SvelteKit's efficiency in rendering lightweight applications also ensured that users in rural areas with low-bandwidth internet could access the AI-powered digital archives, aligning with the goals of equitable access to historical records. As such, the archive's use case was simplified to allow for usability by a wider community (see Figure 2).

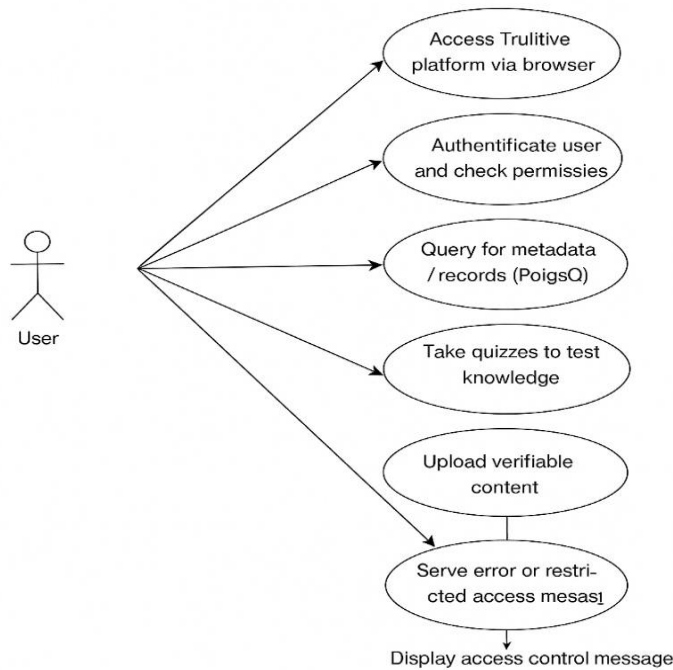


Figure 1: Truthive platform Use Case (Source: Primary data, 2025)

The backend architecture was built on SvelteKit Application Programming Interface (API) routes to support seamless integration with the frontend while maintaining flexibility and responsiveness (Olev & Alumäe, 2022; Kawai, Wu, Matubara & Takada, 2024). This architecture allowed for real-time content delivery and efficient routing of user queries, which were essential for how and when sensitive content is accessed (Gonzalez & Torres, 2021). Furthermore, such a design reflects the influence of survivor-centric archival methodologies, which prioritise agency and ethical representation of trauma survivors. The backend was also designed to allow dynamic privacy features, which support contextual information disclosure based on community protocols, thereby reinforcing participatory archival ethics (see Figure 3).

The use of PostgreSQL via Supabase, hosted securely on Amazon Web Services (AWS), provided a robust, scalable, and encrypted database solution that is ideal for managing complex metadata structures (Yang, Xiong & Ren, 2020; Manchana, 2024) and in the context of the project, sensitive archival records. PostgreSQL's compliance with Atomicity, Consistency, Isolation, and Durability (ACID) principles also ensured the integrity of the collected information. Furthermore, Supabase added real-time synchronisation and other features such as user authentication and permission features that were crucial for implementing community-controlled data sovereignty (Christen, 2012). The collected and uploaded archival data included testimonies, photos, and documents, which were retrieved with precision and cultural sensitivity. Such a system reinforces the Findable, Accessible, Interoperable, and Reusable (FAIR) principles of data stewardship while also embedding indigenous and decolonial approaches to information governance, as highlighted by Ndlovu-Gatsheni (2013).

Leveraging artificial intelligence for ethical archiving

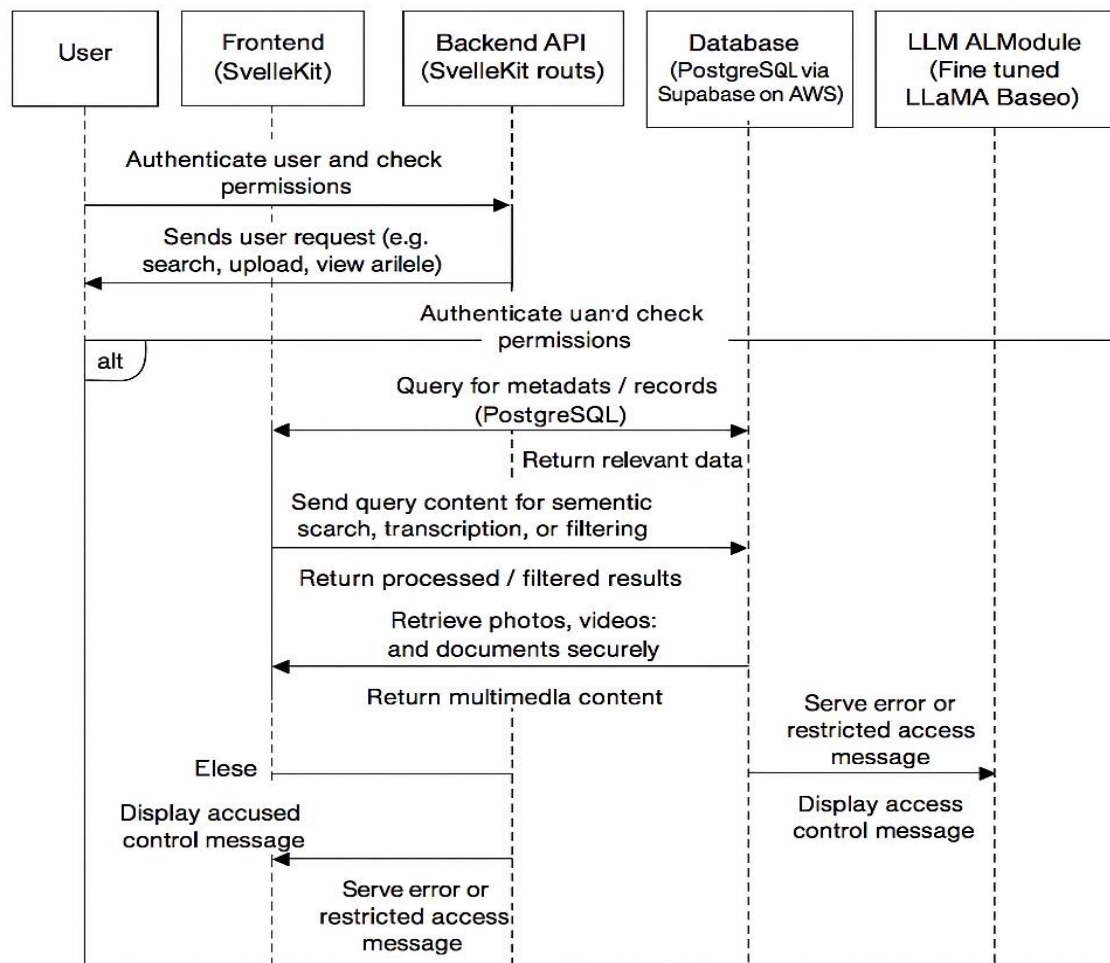


Figure 3: Sequence diagram showing system functionality (Source, Researchers 2025).

The incorporation of custom fine-tuned Large Language Models (LLMs) based on the LLaMA architecture further ensured that AI modules were context-aware and ethically grounded (Buolamwini & Gebru, 2018). For example, by fine-tuning the AI on Zimbabwean linguistic patterns, euphemisms, and oral traditions, the system supports semantic search, transcription, and sensitivity filtering in a culturally relevant manner. This was critical in respecting the voices of Gukurahundi survivors while also preventing re-traumatisation through uncontrolled exposure of narratives. The AI modules were deployed not only as neutral tools but also as participatory and ethical tools within a decolonial archival framework (Noble, 2018). Supabase's encrypted object storage further ensured secure hosting of multimedia records, facilitating trauma-informed access while protecting the long-term integrity and privacy of survivor-contributed materials.

Key findings and discussion

Information fragmentation and fear of loss

Participants among survivors, civil society actors and independent researchers who engaged in this inquiry expressed concerns about the fragmented and highly precarious state of the existing

Gukurahundi-related documentation and records. Many participants described being in possession of key documents such as survivor accounts, family photos, newspaper clippings, court affidavits, and handwritten manuscripts. For example, one participant showed researchers a police report dating back to 1984 when they went to report a lost relative to the police. However, the study found that most of these documents were now in degraded states, and some participants also reported willingly destroying the records for various reasons, which included fear of victimisation and the religious beliefs associated with forgiveness. Furthermore, in some instances, interviewees highlighted that they had records on old cassette tapes, but they had not yet been transcribed.

Upon probing further, researchers realised that participants adopted this strategy of document preservation from the National Archives of Zimbabwe (NAZ), which has, some time ago, conducted a project called “capturing a fading memory”. The delay or inability to effectively preserve these histories provides great examples of the historical and political legacies of unwritten archival and records management practices. These concerns were mirrored in broader discussions about “archival anxiety,” a term used by Gilliland and Caswell (2016) to describe the emotional and existential concern that communities face when they fear their histories may vanish without being acknowledged or preserved. In Zimbabwe, where formal efforts to document Gukurahundi have been inconsistent and politically fraught, the threat of informational loss is especially acute (Alexander, 2021; Mashingaidze, 2020). This fear of loss was particularly prominent among older community members, many of whom had safeguarded documents since the 1980s and viewed them as irreplaceable components of historical truth.

Community agency and ownership of narratives

The participatory design approach employed in the development of the Truthive platform was crucial in cultivating trust and legitimacy among the affected communities. This was in contrast to some research approaches that treat participants as mere information. The participatory approach, as used in the study, appreciated a wide range of stakeholders (see Table 1.1) as co-owners and stewards of their own narratives, as such breaking mistrust. This approach resonates with Caswell’s (2014) framework of identity-based community archives, which advocates for community-driven archival practices that challenge historical biases and marginalisation. By situating community members as archival agents rather than subjects, the project disrupted conventional power dynamics and provided a model for ethical memory preservation in post-conflict contexts. It is worth noting that some participants highlighted that their voices were often dismissed or misrepresented if not totally excluded. This marginalisation resonates with critiques by Autesserre (2012), who argues against dominant conflict narratives imposed by outsiders. In the case of Gukurahundi, sanctioned silences and the fear of reprisal have long shaped public discourse (Alexander, 2021; Mashingaidze, 2020; Ndlovu, 2021; Sibanda, 2021; Mercier, 2022). This importance of community agency upholds wider scholarly arguments that transitional and historical justice must be participatory and ethically sensitive (Gready & Robins, 2014; Ncube & Siziba, 2015; Mathuthu, 2021; Bvirindi, Landa, & Chidarikire, 2024). As such, the Truthive’s inclusive governance structure, where local communities had the power to vet and redact sensitive content or identify culturally appropriate terminology, was seen not only as a safeguard against re-traumatisation but also a

Leveraging artificial intelligence for ethical archiving

form of historical redress. For example, women's groups in particular insisted on the inclusion of stories centred on gender-based violence, often overlooked in official narratives, and contributed to framing content in a way that honoured victims' dignity and communal resilience. Ensuring community control over narrative production thus not only validates individual trauma but also helps reconstitute a collective historical identity fractured by violence and silence. In this way, the archive becomes both a democratic technology and a cultural artefact of resistance and restoration.

Fear and anticipation

A prevalent theme that emerged from the study was the emotional contrast experienced by survivors and the community concerning digital access to Gukurahundi records. Most of the project participants expressed cautious confidence due to the sensitive nature of the topic. For example, they recognised the introduction of AI-driven digital archives as a necessary tool in the preservation of history. This confidence aligns with research findings of projects carried out on the Gukurahundi genocide, where researchers emphasised the importance of accessible archives in transitional justice efforts in Zimbabwe (Matsika, 2017; Ngwenya, 2020; Sibanda, 2021; Bvirindi et al., 2024). This is also similar to Caswell's (2014) propositions that community archives need to empower marginalised voices in a bid to reclaim narrative agency. The study also found that there was a younger generation that was divorced from the direct trauma of the Gukurahundi genocide. For this particular group of stakeholders, the AI-driven digital archives were key in acting as a learning hub for constructing a fragmented historical past. This is also part of the reasons why, using the iterative model, researchers had to add a quiz module to the platform. This was an essential step in enhancing knowledge retention for users.

However, it is worth noting that alongside optimism and confidence that existed among survivors, there was a deep-seated fear linked to surveillance, retaliation, and re-traumatisation. These concerns were mostly referenced by the older participants with lived traumatic experiences. This fear is consistent with documented cases where victims of Gukurahundi have faced intimidation when speaking publicly about their experiences (CCJPZ, 1997; Vambe, 2012; Moyo, 2021; Mpofu, 2021; Sibanda, 2021). During the data collection period, researchers were shown a memorial plaque that was bombed by unknown people the very night it was erected in Bhalagwe, Maphisa. According to the study's participants, in particular the survivors, this was a deliberate effort to erase history and promote fear among those with knowledge of and records on the Gukurahundi genocide. These findings thus necessitated an AI-driven digital archive that would safeguard survivor privacy and at the same time foster trust of the contributing survivors. According to Harris and Verne (2021), in such cases, ethical imperatives in managing trauma-sensitive archives should not be overlooked. Therefore, the implementation of AI tools for anonymisation and access control was crucial to mitigate risks of exposure and retaliation.

The findings of the study also showed that trust issues surrounding state involvement in the management and access to Gukurahundi records were still prevailing as a significant barrier to full acceptance of the AI-driven digital archive. Most of the study's participants expressed

wariness about whether governmental oversight might compromise the archive's independence and confidentiality. This is especially true considering the recent media policy, which was released by the government of Zimbabwe. These findings reflected broader concerns about institutional control of memory (Ndlovu, 2018; Alexander, 2021; Sibanda, 2021). Furthermore, these distrust issues underscore the importance of adopting participatory archival design models wherein affected communities are actively involved in the design of access protocols and content inclusion (Krimerman, 2001; Mercier, 2022). Such community-led frameworks could enhance the digital archive's legitimacy and efficacy and, at the same time, address anxieties about information misuse or even manipulation. As such, it was essential for researchers to consider the design and integration of robust anonymisation protocols to balance the archive's promise as an education tool and the ethical obligation to protect contributors.

A new era for information access

The research established that aside from fears about surveillance, the introduction of the AI-powered digital archive on Gukurahundi kindled a renewed sense of hope, particularly among CSOs and academic experts. For example, most of the project's participants expressed that they had grown up with a fragmented, censored, and sometimes distorted account of the Gukurahundi genocide. These findings are also similar to what Ndlovu-Gatsheni (2013), Sibanda (2021), and Mpofu (2021) highlighted in their studies about the strong censorship on Gukurahundi records and their fragmentation, which made it difficult to access them. As such, it was certain that the AI-powered digital archive presented not just a digital repository but also a transformative and progressive tool that challenged access limits.

Focus group interaction with some survivors and witnesses of the Gukurahundi genocide revealed some form of excitement about how their testimonies would be digitally preserved in ways that respected cultural norms and community protocols. For example, researchers collected data in various local languages, and their testimonies were transcribed, translated, and integrated into the archive using AI-driven NLP. The AI-driven archive's design deliberately incorporated participatory methods, as this ensured that survivors felt ownership of their stories. Mashingaidze (2010) and Sibanda (2021) highlighted that one of the prevalent challenges in the documentation of Gukurahundi was the deliberate neglect of survivors' true voices. Therefore, the emphasis on community-led documentation was essential in deliberately fostering trust for technological intervention.

The excitement around the AI-driven digital archive was also rooted in its potential to democratise information and the ability to enhance meaning. AI capabilities such as multilingual translation and semantic search allow users to access narratives in various formats (Buolamwini & Gebru, 2018; Noble, 2018). For example, in the case of the Truthive platform, users are able to access oral histories, audio interviews, and visual documents, as such, making the archive inclusive for both literate and non-literate populations. During the testing phase, it was inspiring to hear one participant highlight that they used the Truthive platform to develop educational materials in isiNdebele for rural schools, allowing the community to know more about Gukurahundi. This represents a fundamental shift in the politics of memory, that is, from a top-down censored narrative to decentralised, community-powered knowledge. Furthermore,

Leveraging artificial intelligence for ethical archiving

several PVOs and academic experts also highlighted the potential of ML to help reconstruct missing information or identify duplicate records across different repositories. This was especially important considering that some of the participants had actually hidden documents by burying them underground due to fear of victimisation.

Persistent challenges of the internet and digital infrastructure

One of the persistent challenges encountered by the study was the issue of the digital divide (Chidakwa & Khanare 2024). Therefore, despite the transformative potential of the Truthive system, infrastructural challenges in Zimbabwe, mostly in remote and rural areas, remain a major impediment. For example, participants from the remote areas in Matabeleland repeatedly highlighted the realities of limited internet penetration and the high cost of internet data in Zimbabwe. This created a dilemma in which most of the communities that created the Truthive platform could not easily benefit from it. As such, discussion started on supporting the technological intervention with localised physical archives. To address these systemic limitations, participants proposed the creation of solar-powered community access points or digital kiosks embedded within schools, libraries, and community centres. These would serve as physical nodes for digital engagement, especially in areas where internet connectivity is sparse. These spaces could further create employment opportunities for the youths and, at the same time, promote dark tourism, which is a multibillion-dollar industry (Ashworth & Isaac, 2015; Proos & Hattingh, 2020). Such suggestions align with Hurley's (2016) call for "community clouds" and digital preservation models tailored to small or marginalised archives. Furthermore, local archive centres could host printed anthologies of testimonies or audio stations playing oral histories in local languages, ensuring that communities without internet access are not excluded from accessing historical records.

Digital literacy and intergenerational gaps

Another emerging theme was the variety of digital literacy across age ranges. While youth participants are inclined to engage with the Truthive platforms through mobile telephones or personal computers, older survivors, particularly in rural communities, tended to have difficulties using the platform. This presented the perpetual concerns about the exclusion and marginalisation of primary custodians of oral history. Therefore, it was evident that without targeted interventions, such as basic digital skills capacitation, the Truthive platform risks reinforcing existing inequities in access to historical knowledge. Tsabedze (2023) also warns that without adequate digital training for local archivists and volunteers, even well-designed technologies risk falling into disuse. Intergenerational collaboration was also mentioned as a way to address this, along with younger kin offering to support their elders as they navigated through the Truthive platform. It is also worth mentioning that the archive would now present not only a new opportunity for data access but also cross-generational conversation and storytelling.

Value of anonymisation and security protocols

Concerns about personal security and anonymity were a prominent theme in the responses given by the study's participants. For example, some recounted specific instances where family members or neighbours have been victimised after participating in previous truth-telling initiatives. Consequently, the use of AI-powered anonymisation processes by this study was received with strong approval. Survivors, specifically older women and families affiliated with the former Zimbabwe People's Revolutionary Army (ZIPRA), expressed that, given a lack of guaranteed identity protection, they would abstain from any contribution. The introduction of particular technologies like automated redaction of names and locations, pseudonym generation, and access controls enabled through encryption was recognised as an important movement toward ethically documenting the Gukurahundi records. As community leaders in Matabeleland North noted, the only way trust in the archive could increase would be to ensure that contributors knew that their contributions could not easily be traced back to them without their consent. This outcome is consistent with Caswell and Cifor's (2016) work on the importance of 'radical empathy' and survivor-centred design within archival practice, especially within contexts of trauma and mistrust. The ability for AI to automate and scale such privacy provisions was understood to be transformative, especially when compared to traditional archival processes that lacked access controls at the level of granularity. These views resonate with archival ethical demands for what some have called "participatory confidentiality" (Duff et al., 2013), wherein contributors themselves help determine how their data is protected and shared.

Conclusion

The study revealed deep concerns among survivors, civil society, and researchers regarding the fragmented, deteriorating, and often hidden nature of Gukurahundi-related records. Many participants described being in possession of personal collections of vital documents, including police reports, court affidavits, photographs, and audio recordings. Many of these records were now in poor condition or had been destroyed out of fear of retribution or due to religious and cultural beliefs. The vulnerability of records underscored a wider phenomenon of archival anxiety, where communities fear their histories may disappear without acknowledgement or preservation. The study linked this anxiety to Zimbabwe's historically inconsistent and politically fraught documentation efforts surrounding Gukurahundi. In response, the Truthive platform was developed using a participatory design approach, which recognised community members not just as informants but as custodians of their histories. This inclusive model, aligned with identity-based archival frameworks, challenged external control of memory, enabled ethical preservation, and allowed communities to frame narratives in culturally sensitive and dignity-centred ways.

Despite enthusiasm for the AI-driven Truthive platform as a transformative tool for education, memory preservation, and community healing, participants expressed deep-rooted fears related to state surveillance, retaliation, and the potential misuse of sensitive information. Older survivors, in particular, voiced concerns about government control and emphasised the need for strong anonymisation and access control features, which were effectively addressed through

Leveraging artificial intelligence for ethical archiving

AI-powered encryption, redaction, and pseudonym tools. These features were vital to building trust, especially in a context where public testimonies have previously resulted in violence and intimidation. Additionally, digital literacy gaps and limited infrastructure, particularly in rural areas, posed significant barriers to access. Participants advocated for community access points, intergenerational collaboration, and offline versions of the archive to ensure inclusivity. The Truthive platform thus emerged as both a symbol of resistance and a tool of empowerment, providing a space where marginalised communities could reclaim and safeguard their narratives while navigating fears of erasure and state interference.

Recommendations

The study makes the following recommendations.

1. Urgent digitisation and restoration of existing Gukurahundi-related records must be prioritised to prevent irreversible loss.
2. Future archival initiatives should adopt participatory design models that position affected communities as co-creators and custodians of their histories. Ethical documentation processes must include culturally appropriate storytelling, community vetting rights, and inclusive content governance.
3. To address survivor fears of retaliation and surveillance, digital archives should integrate robust anonymisation technologies and survivor-controlled privacy settings.
4. AI-powered digital archives must continue expanding multilingual, multimedia capabilities to democratise historical knowledge across diverse literacy levels.
5. Policymakers and stakeholders should invest in low-cost, solar-powered community access points to bridge the digital divide in rural areas.
6. Targeted digital literacy training for older survivors and local archivists is necessary to prevent exclusion of key historical voices.
7. Archival projects should embed survivor-centred privacy features such as automated redaction, pseudonym generation, and encrypted access controls. Ongoing dialogue with contributors about data sharing preferences will enhance ethical accountability and participant confidence.

Funding

Truthive is a project under the Initiative for Transitional Justice in Africa, implemented in partnership with the Africa Transitional Justice Legacy Fund (ATJLF) and funded by the European Union.

Declaration of conflicting interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Leveraging artificial intelligence for ethical archiving

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