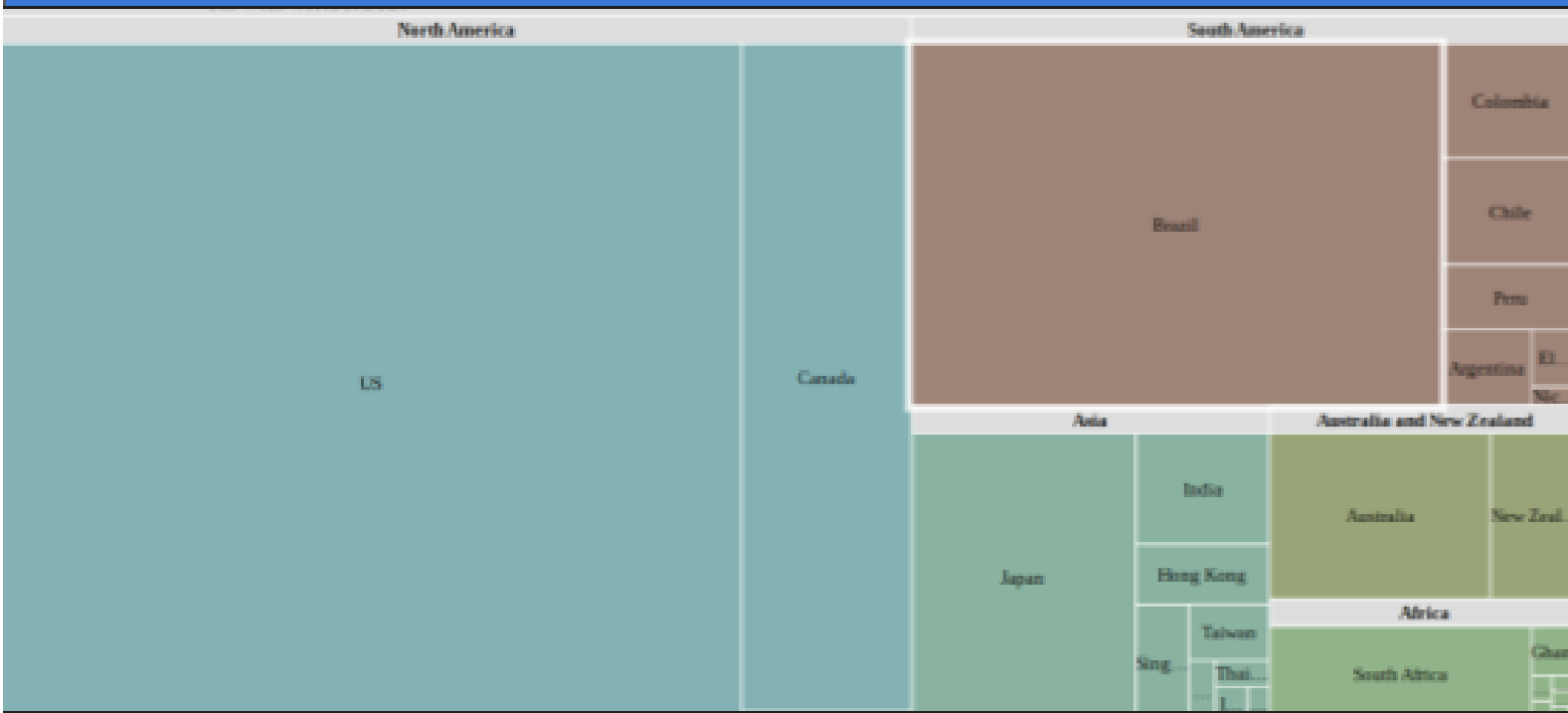


ETD 2024

27th International Symposium on Electronic Theses and Dissertations

*"Electronic Thesis and Dissertation Visibility at a Global
Scale"*

November 4-6, 2024
Livingstone · Zambia



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27th International Symposium on Electronic Theses and Dissertations

The 27th International Symposium on Electronic Theses and Dissertations (ETD 2024) aims to bring together global leaders and researchers working in the broad areas of digital libraries, institutional repositories, scholarly research and electronic theses and dissertations. The theme of ETD 2024 is "ETD Visibility at a Global Scale", and will explore innovative approaches that make use of Electronic Theses and Dissertations (ETDs), including the use of modern-day Artificial Intelligence techniques such as Large Language Models and exploration of advances that will result in increased visibility of ETDs at a Global Scale.

Thank you so very much for coming to Livingstone, Zambia to participate in the ETD 2024 conference events. We sincerely hope you enjoy the conference and your short stay in Livingstone, and, more importantly have productive and worthwhile discussions and meet new people!

Zikomo Kwambili!

Best Wishes
Lighton Phiri (Chair)

Local Conference Organizing committee

Lighton Phiri, UNZA	Denny Nsokolo, HEA	Francina Makondo, UNZA
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Albertina Mooka, UNZA	Christabel Kunda, UNZA	

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Partner Institutions and Sponsors

The ETD 2024 conference was organised by the Networked Digital Library of Theses and Dissertations (NDLTD) and, additionally hosted by The University of Zambia (UNZA) and co-hosted by The Higher Education Authority (HEA) of Zambia and Zambia Research and Education Network (ZAMREN).

Gold, Silver and Bronze Sponsors



Partner Institutions/Organisations



Improving the Mkulima Repository Content: Utilizing Theses, Dissertations, and LLMs for Agricultural Knowledge Dissemination in Kiswahili

Joseph P Telemala, Sokoine University of Agriculture, Tanzania

The Sokoine National Agricultural Library (SNAL) at the Sokoine University of Agriculture (SUA) faces significant challenges in disseminating agricultural information to Swahili-speaking communities, as most research outputs are predominantly in English. This language barrier hinders the effective transmission of vital agricultural knowledge to key stakeholders in the agriculture-food value chain who use Kiswahili in their daily activities. To address this gap, SNAL established the Mkulima Collection and Repository, dedicated to collecting agricultural content in Kiswahili. Despite these efforts, the Swahili content in the repository remains limited.

This study seeks to enhance the Mkulima Repository by translating abstracts from English-language theses and dissertations using MarianMT, a machine translation (MT) model based on large language models (LLMs). The selected abstracts underwent pre-processing, machine translation, and subsequent quality assessment by multilingual experts.

Our findings reveal significant challenges in using LLMs like MarianMT for low-resource languages such as Kiswahili. While the MT system offers a rapid and scalable method for translating academic content, the accuracy and fluency of the translations were found to be suboptimal, as indicated by the evaluators. Common translation errors, particularly in agriculture-specific terminology and scientific names, highlight the limitations of current MT models in handling specialized agricultural content. These issues underscore the need for a more refined approach, including the development of a curated dataset of Swahili-English pairs that focus on agricultural jargon and the integration of a knowledge base to address the translation of scientific terms.

E-Theses and Dissertations in Zambia: A Case Study of Two Universities in Kabwe

Jive Lubungu, Kwame Nkrumah University, Zambia

The Sokoine National Agricultural Library (SNAL) at the Sokoine University of Agriculture (SUA) faces significant challenges in disseminating agricultural information to Swahili-speaking communities, as most research outputs are predominantly in English. This language barrier hinders the effective transmission of vital agricultural knowledge to key stakeholders in the agriculture-food value chain who use Kiswahili in their daily activities. To address this gap, SNAL established the Mkulima Collection and Repository, dedicated to collecting agricultural content in Kiswahili. Despite these efforts, the Swahili content in the repository remains limited.

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Posters Track

Automatic Electronic Thesis and Dissertation Guideline Verification For Consistently Formatted Manuscripts

Mubanga C. Chibesa,

The University Of Zambia

Introduction: Higher Education Institutions worldwide enforce guidelines and academic approaches to ensure scholarly integrity and adherence to academic standards (Razi et al., 2019). The University of Zambia is not an exception. Like most HEIs, it offers training to postgraduate students, and one of the key aspects of postgraduate training is producing an Electronic Thesis and Dissertation manuscript. The Directorate of Research and Graduate Studies (DRGS) at the University of Zambia provides guidelines that stipulate how ETDs should be formatted. However, the process of checking for conformance is a manual and tedious procedure, resulting in the submission of inconsistently formatted manuscripts in the Institutional Repository (IR). To address this challenge, our project seeks to implement a tool that will automate the process of checking ETD compliance against established postgraduate guidelines. The tool will leverage data mining techniques to perform these tasks. More specifically, Document Layout Analysis (DLA) (Binmakhashen and Mahmoud, 2019) will be the core approach used in the implementation. The tool will flag portions of ETD manuscripts that do not conform to established guidelines. Hence, this will help resolve the inconsistencies in the format of submitted manuscripts.

Methodology: Using a mixed methods approach, document analysis will be employed to understand the postgraduate guidelines stipulated in the “Regulations and Guidelines for Postgraduate Studies” document; content analysis will be used on randomly sampled ETDs to experimentally determine the extent of the problem. Finally, a DLA Natural Language Processing model will be developed and evaluated using standard DLA metrics such as Structure Similarity Index and Intersection over Union.

Results: This study is part of ongoing work aimed at developing an automated tool that will verify ETD manuscripts’ compliance with postgraduate guidelines. Upon successful completion of this project, we anticipate a reduced workload associated with the manual checking of manuscript conformity to postgraduate guidelines, freeing up time and resources to handle other academic tasks like focusing more on the content of the manuscripts. Not only that, academic integrity will consequently improve through the standardization of ETD formats, adding to the university’s reputation and credibility.

In conclusion, the development of an ETD automatic guideline verification tool presents an opportunity to enhance efficiency and promote consistency in the quality of ETDs while alleviating the challenges faced in the manual checking process, consequently reducing the workload for students, supervisors, and examiners alike.

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