DHASA 2023
Digital Humanities Association of Southern Africa

27 November - 1 December 2023
Nelson Mandela University,
Gqeberha, South Africa
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About

DHASA 2023

The Digital Humanities Association of Southern Africa (DHASA) is pleased to announce its fourth conference, focusing on the theme “Digital Humanities for Inclusion.” which takes place at Nelson Mandela University, Gqeberha, South Africa. In a region where the field of Digital Humanities is still relatively underdeveloped, this conference aims to address this gap and foster growth and collaboration in the field. The conference offers an opportunity for researchers interested in showcasing their work in the broad field of Digital Humanities to come together. By doing so, the conference provides a comprehensive overview of the current state-of-the-art in Digital Humanities, particularly within the Southern Africa region. As such, the conference consists of submissions related to Digital Humanities research conducted by individuals from Southern Africa or research focused on the geographical area of Southern Africa.

Furthermore, the conference serves as a platform for information sharing and networking among researchers passionate about Digital Humanities. By bringing together experts working on Digital Humanities in Southern Africa or with a focus on Southern Africa, we aim to promote collaboration and facilitate further research in this dynamic field. In addition to the main conference, affiliated tutorials are organized, providing researchers with valuable insights into novel technologies and tools. These supplementary events are designed for researchers interested in specific aspects of Digital Humanities or seeking practical information to enter or advance their knowledge in the field.

Organizing committee

- Johannes Sibeko, Nelson Mandela University
- Aby Louw, Council for Scientific and Industrial Research
- Alan Murdoch, Nelson Mandela University
- Amanda du Preez, University of Pretoria
- Andiswa Bukula, South African Centre for Digital Language Resources
- Andiswa Mvanyashe, Nelson Mandela University
- Avashna Govender, Council for Scientific and Industrial Research
- Gabby Dlamini, Nelson Mandela University
- Ilana Wilken, Council for Scientific and Industrial Research
- Jonathan van der Walt, Nelson Mandela University
- Laurette Marais, Council for Scientific and Industrial Research
- Mukhtar Raban, Nelson Mandela University
- Nomfundu Khumalo, Nelson Mandela University
- Nosiphiwo Mazaleni, Nelson Mandela University
- Menno van Zaanen, South African Centre for Digital Language Resources
Programme committee

- Aby Louw (Council for Scientific and Industrial Research)
- Adéle Adendorff (University of Pretoria)
- Alan Murdoch (Nelson Mandela University)
- Alette Schoon (Rhodes University)
- Amanda Du Preez (University of Pretoria)
- Andiswa Bukula (South African Centre for Digital Language Resources)
- Andiswa Mvanyashe (Nelson Mandela University)
- Anusharani Sewchurran (Durban University of Technology)
- Ayodele James Akinola (Michigan Technological University)
- Benito Trollip (South African Centre for Digital Language Resources)
- Deon du Plessis (South African Centre for Digital Language Resources)
- Friedel Wolff (South African Centre for Digital Language Resources)
- Gabby Dlamini (Nelson Mandela University)
- Gerhard van Huyssteen (North-West University)
- Gonneke Groenen (North-West University)
- Gordon Matthew (North-West University)
- Hussein Suleman (University of Cape Town)
- Héniel Fourie (North-West University)
- Ilana Wilken (Council for Scientific and Industrial Research)
- Inge van de Ven (Tilburg University)
- James Ayo-Akinola (Chrisland University)
- Johannes Sibeko (Nelson Mandela University)
- Jonathan Van Der Walt (Nelson Mandela University)
- Juan Steyn (South African Centre for Digital Language Resources)
- Justus Roux (Stellenbosch University)
- Karabo Maiyane (Nelson Mandela University)
- Langa Khumalo (South African Centre for Digital Language Resources, North-West University)
- Laurette Marais (Council for Scientific and Industrial Research)
- Marissa Griesel (South African Centre for Digital Language Resources)
- Martin Bekker (University of Johannesburg)
- Martin Puttkammer (Centre for Text Technology (CText))
- Menno van Zaanen (South African Centre for Digital Language Resources)
- Mlamli Diko (University of South Africa)
- Mmasibidi Setaka (South African Centre for Digital Language Resources)
- Mukhtar Raban (Nelson Mandela University)
- Muzi Matfunjwa (South African Centre for Digital Language Resources)
- Papi Lemeko (Central University of Technology)
- Pia Bombardella (North-West University)
- Ray Siemens (University of Victoria)
- Roalde Eiselen (North-West University)
- Rooweither Mabuya (South African Centre for Digital Language Resources)
• Rory Du Plessis (University of Pretoria)
• Sebolelo Mokapela (University of the Western Cape)
• Tanja Gaustad (Centre for Text Technology (CTeXT))
• Tarryn Rennie (Nelson Mandela University)
• Tunde Ope-Davies (University of Lagos)
## Monday 27 November 2023

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:00–09:00</td>
<td>Registration</td>
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<tr>
<td>09:00–09:30</td>
<td>Ice breaker</td>
</tr>
<tr>
<td>09:30–10:00</td>
<td>Opening and welcome; Prof Pamela Maseko, Prof Menno van Zaanen</td>
</tr>
<tr>
<td>10:00–11:00</td>
<td>Long presentation session</td>
</tr>
<tr>
<td></td>
<td>Theatre; Mmasibidi Setaka</td>
</tr>
</tbody>
</table>
| 10:00–10:30 | **LP**  Personal Archives for Community Building: Lessons Learned from PG Sindhi Library  
|            | Soni Wadhwa                                                          |
| 10:30–11:00 | **LP**  Recovering knowledge commons for the global south            |
|            | Arjun Ghosh                                                          |
| 11:00–11:30 | Tea break                                                            |
| 11:30–13:00 | Long presentation session                                             |
|            | Theatre; Ilana Wilken                                                 |
|            | Venue 2; Mmasibidi Setaka                                            |
| 11:30–12:00 | **LP**  The importance of a Learner Management System in implementing data driven instruction in higher education institutions  
|            | Ayanda Deliwe                                                        |
| 12:00–12:30 | **LP**  The possibility of using African languages as media of teaching and learning in South Africa  
|            | Raesebe Florah Mabaso-Nkuna, Nyikelani Davis Mabasa, Brian Valoyi    |
| 12:00–12:30 | **LP**  Convening Context: Reading the Bleek and Lloyd !Xun Collection Digitally  
|            | Magdaleen du Toit                                                    |
| 12:30–13:00 | **LP**  Unmasking Deception: An Exploratory Study of Viewers’ Attitudes Towards Romantic Betrayal  
<p>|            | Nkazimlo Ngcungca, Johannes Sibeko                                   |
| 13:00–14:00 | Lunch break                                                          |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Type</th>
<th>Title</th>
<th>Presenters</th>
</tr>
</thead>
</table>
| 14:00–15:00  | KP   | Keynote presentation  
Theatre; Johannes Sibeko                                            |                                                                           |
|              |      | A unit of data or a human subject? The inclusion of marginalised voices and humanising    | Rory du Plessis                                                          |
|              |      | stories from digital archives                                                              |                                                                           |
| 15:00–15:30  |      | Tea break                                                                                  |                                                                           |
| 15:30–16:30  | LP   | Long presentation session  
Theatre; Lamla Notshulwana                              |                                                                           |
<p>|              |      | Developing a code-mixed sentiment analysis for Xitsonga-English music review               | Blessing NKuna, Thipe Modipa, Simon Ramalepe                               |
|              |      | The use of augmented reality in the teaching and learning of isiXhosa poetry               | Lukhanyo Makhenyane                                                      |
|              |      |                                                                                            |                                                                           |</p>
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>08:30–09:00</td>
<td>Registration</td>
<td></td>
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<tr>
<td>09:00–13:00</td>
<td><strong>DH-IGNITE</strong></td>
<td><strong>Theatre; Anelda van der Walt</strong></td>
</tr>
<tr>
<td>09:00–09:20</td>
<td><strong>SP</strong></td>
<td><strong>Introduction to DH-IGNITE and Ice breaker</strong></td>
</tr>
<tr>
<td>09:20–09:40</td>
<td><strong>SP</strong></td>
<td><strong>Big vision for DH/CSS in South Africa</strong></td>
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<tr>
<td>09:40–10:00</td>
<td><strong>SP</strong></td>
<td><strong>SADiLaR’s role in DH capacity development in SA</strong></td>
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<td>10:00–10:15</td>
<td><strong>SP</strong></td>
<td><strong>Communities of practice (ESCALATOR)</strong></td>
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<tr>
<td>10:15–10:45</td>
<td><strong>SP</strong></td>
<td><strong>Open Seeds Experience</strong></td>
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<tr>
<td>10:45–11:15</td>
<td><strong>TEA BREAK</strong></td>
<td></td>
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<tr>
<td>11:15–12:00</td>
<td><strong>SP</strong></td>
<td><strong>Where to learn new skills</strong></td>
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<tr>
<td>12:00–12:40</td>
<td><strong>PD</strong></td>
<td><strong>Panel discussion</strong></td>
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<tr>
<td>12:40–13:00</td>
<td><strong>SP</strong></td>
<td><strong>Feedback and future directions</strong></td>
</tr>
<tr>
<td>13:00–14:00</td>
<td><strong>LUNCH BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>14:00–15:00</td>
<td><strong>Keynote presentation</strong></td>
<td><strong>Theatre; Gabby Dlamini</strong></td>
</tr>
<tr>
<td>14:00–15:00</td>
<td><strong>KP</strong></td>
<td><strong>Foregrounding the human in the time of AI: What do we mean by inclusive digital humanities?</strong></td>
</tr>
<tr>
<td>15:00–15:30</td>
<td><strong>TEA BREAK</strong></td>
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</tr>
<tr>
<td>15:30–16:15</td>
<td><strong>Short presentations session</strong></td>
<td><strong>Theatre; Gabby Dlamini</strong></td>
</tr>
<tr>
<td>15:30–15:45</td>
<td><strong>SP</strong></td>
<td><strong>Bringing children’s dictionaries to digital life</strong></td>
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<tr>
<td></td>
<td><strong>SP</strong></td>
<td><strong>Empathic Engagement and Aesthetic Appreciation Between Readers’ Ethnicity and Narratives’ Literary Prestige</strong></td>
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<tr>
<td>15:45–16:00</td>
<td><strong>SP</strong></td>
<td><strong>Generation of segmented isiZulu text</strong></td>
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<td></td>
<td><strong>SP</strong></td>
<td><strong>Re-discovering narratives of South African Defence Force servicemen through the informal digital archive</strong></td>
</tr>
<tr>
<td>16:00–16:15</td>
<td><strong>SP</strong></td>
<td><strong>Digitizing the History of the Establishment of China-Africa Diplomatic Relations: Significance and Future Prospects</strong></td>
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## Wednesday, 29 November 2023

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>08:00–08:30</td>
<td>Registration</td>
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<tr>
<td>08:30–09:30</td>
<td>Panel Discussion</td>
<td>Theatre; Johannes Sibeko</td>
</tr>
<tr>
<td>08:30–09:30</td>
<td>PD Cultivating a Cybersecurity Culture in Grade R Children: The CyberSmart Squad! Noluxolo Gcaza, Kerry-Lynn Thomson, Nomfundo Khumalo</td>
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<tr>
<td>09:30–10:30</td>
<td>Lightning session</td>
<td>Theatre; Johannes Sibeko</td>
</tr>
<tr>
<td>09:30–09:42</td>
<td>AP Digitalising indigenous South African languages through bilingualised dictionaries: An open access application Celimpilo Dladla, Alice Leal, Hlongwana Colfar, Godfrey Mabunda, Asanda Mzizi</td>
<td></td>
</tr>
<tr>
<td>09:42–09:54</td>
<td>AP Research data management and curation in the digital humanities in Southern Africa: initial thoughts from a current study Michelle Kahn, Karin de Jager</td>
<td></td>
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<tr>
<td>09:54–10:06</td>
<td>AP Beyond Fandom: An Introduction to Fan SAudio &amp; Exploration of Non-Western Perspectives Natalie Le Clue, Janelle Vermaak-Griessel</td>
<td></td>
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<tr>
<td>10:06–10:18</td>
<td>AP Language and Identity: Identity expression in language use by amaXhosa on Youtube Nkazimlo Ngcungca</td>
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<tr>
<td>10:18–10:30</td>
<td>AP Preserving a community: Situating The Jewish Living Archive in the Global South Katie Garrun</td>
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<td>10:30–11:00</td>
<td>Tea break</td>
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<tr>
<td>11:00–13:00</td>
<td>Long presentations session</td>
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<tr>
<td>11:00–11:30</td>
<td>LP Exploring ASR fine-tuning on limited domain-specific data for low-resourced languages Franco Mak, Jaco Badenhorst, Avashna Govender Digital Archival Preservation and Cultural Heritage: a Practice-led Study and Preservation Project of the Work of Late Sculptor Bonginkosi Michael Gasa Sfundo Cele, Michelle Stewart, Richard Asiedu</td>
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<tr>
<td>11:30–12:00</td>
<td>LP Algorithm for assisting grammarians when extracting phonological conditioning rules for Nguni languages Zola Mahlaza, Langa Khumalo Investigating the Role of Digital Arts in Decolonizing Knowledge and Promoting Indigenous Standpoints Richard Asiedu, Michelle Stewart, Sfundo Cele</td>
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<td>Time</td>
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<td>12:00–12:30</td>
<td>LP</td>
<td>The role of social media in Xenophobic attack in South Africa</td>
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<td>12:30–13:00</td>
<td>LP</td>
<td>Towards Including South African Hansard Papers in the ParlaMint schema</td>
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<td>12:30–13:00</td>
<td>LP</td>
<td>Uncovering Media Bias in Eviction Reporting: A Comprehensive Analysis Utilising Sentiment Analysis Framework and Social Media Data</td>
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<td>13:00–14:00</td>
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<td>Lunch break</td>
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<tr>
<td>14:00–15:00</td>
<td>KP</td>
<td>Responsible AI in digital humanities practices</td>
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<tr>
<td>15:00–15:30</td>
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<td>Tea break</td>
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<tr>
<td>15:30–16:30</td>
<td>LP</td>
<td>Automated Hate Speech Detection in a Low-Resource Environment</td>
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<td>15:30–16:30</td>
<td>LP</td>
<td>Towards an Inclusive and Accessible Digital Scholarly Editing: a Critical Assessment</td>
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<td>16:00–16:30</td>
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<td>08:00–08:30</td>
<td>Registration</td>
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<tr>
<td>08:30–09:30</td>
<td>DH Hub launch</td>
<td>Theatre; Alan Murdoch</td>
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<tr>
<td>08:30–09:30</td>
<td>Nelson Mandela’s DH Hub launch</td>
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<tr>
<td>09:30–18:00</td>
<td>Tutorial session</td>
<td>Theatre; Laurinda van</td>
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<td>09:30–11:00</td>
<td>Navigating computer-assisted translation tools: Introduction to the Autshumato</td>
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<td>Integrated Translation Environment (ITE)</td>
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<td>Navigating computer-assisted translation tools: Introduction to the Autshumato</td>
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<td>13:00–14:00</td>
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<td>Navigating computer-assisted translation tools: Introduction to the Autshumato</td>
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<td>Tea break</td>
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<tr>
<td>15:30–18:00</td>
<td>Navigating computer-assisted translation tools: Introduction to the Autshumato</td>
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<td>Integrated Translation Environment (ITE)</td>
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<tr>
<td>18:00–late</td>
<td>Gala dinner</td>
<td>Ocean sciences conference centre</td>
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## Friday, 1 December 2023

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>08:00–08:30</td>
<td>Registration</td>
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<tr>
<td>08:30–12:00</td>
<td>Tutorial session</td>
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<td></td>
<td>Theatre; Benito Trollip, Rooweither Mabuya</td>
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<td></td>
<td>Venue 3; Menno van Zaanen</td>
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<tr>
<td>08:30–10:00</td>
<td>TT Digitisation and Preserving of Textual Data</td>
</tr>
<tr>
<td>10:00–10:30</td>
<td>Tea break</td>
</tr>
<tr>
<td>10:30–12:00</td>
<td>TT Digitisation and Preserving of Textual Data</td>
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<td>12:00–13:00</td>
<td>Lunch break</td>
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<tr>
<td>13:00–14:00</td>
<td>DHASA AGM</td>
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<td></td>
<td>Theatre; Menno van Zaanen</td>
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<tr>
<td>13:00–14:00</td>
<td>LP Annual General Meeting of DHASA</td>
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<td></td>
<td>Menno van Zaanen</td>
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</tbody>
</table>
The need for archiving Sindhi literary tradition in India comes from the space of serving the Sindhi community and its literature divided by the partition of India. This region-less regional literature has been facing a lot of challenges. For instance, it has not thrived the way literatures from the other two partitioned territories (Punjab and Bengal) have because Sindhis did not get a land or a province they could call their own in India. It has also been divided by script in the sense that multiple scripts are in use and the practice of reading/writing in Sindhi itself is disappearing (Daswani, 1989. The digital archive project PG Sindhi Library is an attempt to make older books published in the early years of independent India accessible to the Sindhi community and those interested in South Asian Studies as well as to encourage readers to contribute their items to the library, or even build their own archives. This paper shares the archivist’s findings or lessons learned from the experience with the larger community of digital humanists working in archiving projects. The objective is also to integrate archival work with that of the researcher and theorise archiving from a practitioner’s point of view, given the need to reflect on the unique archival and digital needs of Global South.
Recovering knowledge commons for the global south

Arjun Ghosh

Indian Institute of Technology Delhi, New Delhi, India

The colonial encounter instituted the hegemony of documentary practices over oral, performative and manuscript practices. Only knowledge validated through the process of print publication could stand the test of legal scrutiny. On the one hand the Western epistemological quest glossed over ideas that existed through ephemera, on the other hand that knowledge which Western print practices imbibed from non-European traditions were henceforth, locked behind intellectual property regimes and restrictive archival practices. This tremendously skewed access to knowledge between the North and the South. Tools for digital transformation, particularly those that are based on artificial intelligence (AI) and machine learning (ML), can be culture specific eg. training data for Optical Character Recognition (OCR)/ Hand-written Text Recognition (HTR); datasets for natural language processing. In the absence of culture specific tools in underdeveloped societies Anglo-American interpretive categories and assumptions become the default. Further, Anglo-American institutions work to use their advantage in the balance of knowledge distribution to maintain their hegemonic position. In order to protect the South’s access to human heritage and knowledge we need to develop technologies that leverage the potentials of digital communication for increased conversations among languages of the South.
The importance of a Learner Management System in implementing data-driven instruction in higher education institutions

Ayanda Deliwe
Nelson Mandela University, Gqeberha, South Africa

The Covid-19 pandemic has resulted in the worst downturn in the global economy since the Great Depression in the 1930s. To face the challenges of the global economy, a person needs to possess basic skills including educational skills. Education plays a vital role in building a competitive economy that will hardly be affected by crisis and will be able to ensure that there are high rates of social development. The student population has become very diverse over the decades, making it difficult to teach. Teaching has become very complex to handle because of the increase in a variety of teaching strategies and the diverse student population. There is therefore a need for inclusive and equity pedagogy where teaching considers the diversity of students and the need for teachers to develop teaching strategies that support all students, especially those from disadvantaged backgrounds. The most expensive education is the one that is not completed. This conceptual paper looks at the importance of the Learner Management System (LMS) in implementing data-driven instruction to achieve quality education for all types of students. The LMS is a software system that tracks students’ participation and progress through data systems and assessments. It’s a platform that stimulates an environment for learner achievement and engagement. ‘Data-driven instruction’ can be defined as using student data to enhance instructional practices in the classroom to address the needs and learning styles of individual students. Additionally, data-driven instruction will be explored to discover how it can be used as a systematic and purposeful work to maximise the students’ performance. The study will provide recommendations on how LMS and data-driven instruction can be used to give direction to decisions to improve the students’ outcomes.

Convening Context: Reading the Bleek and Lloyd !xun Collection Digitally

Magdaleen Du Toit
University of Cape Town, Cape Town, South Africa

This article demonstrates the possibilities the digital offers in convening material across time and place, and the new insights into historical collections that are thereby enabled. Drawing on the 19th century Bleek and Lloyd Archive’s visual works, notebooks, and dictionary cards of the northern San !xun language, I show that the convenor, Lucy Lloyd, devised a referencing system that allows the material to span across restrictive categories, and beyond the physical limitations of the page. Through two of my own digital curations of selected !xun material, and material beyond the collection, I demonstrate how digital affordances enable the material to be read together across time and place, and following Lloyd’s referencing system, to be mutually informative, arguing that Lloyd organised the material in a way that almost anticipates digital affordances nearly 150 years later.
Unmasking Deception: An Exploratory Study of Viewers’ Attitudes Towards Romantic Betrayal

Nkazimlo Ngcungca, Johannes Sibeko

Nelson Mandela University, Gqeberha, South Africa

Although romantic deception is prevalent in many societies, it may not be readily acceptable to publicly acknowledge approval of acts associated with such deception. This article explores the publicly acknowledged sentiments of viewers of two YouTube channels aimed at the exposure of romantic deceit through two shows for facilitating a "couple switching phones" game. Specifically, we analyse videos where all participants are caught engaging in extra-relationship affairs. Our study reveals a prevailing trend of neutral comments from viewers, indicating a reluctance to openly acknowledge approval or disapproval of the depicted acts. Interestingly, the discussions primarily revolve around tribal issues [specially focused on the Xhosa tribe] rather than focusing on the subject of romantic deception itself.

The possibility of using African languages as media of teaching and learning in South Africa

Raesebe Florah Mabaso-Nkuna, Nyikelani Davis Mabasa, Brian Valoyi

Department of Applied Languages Faculty of Humanities, Tshwane University of Technology, Pretoria, South Africa

This study sets out to examine the possibility of using African languages as media of teaching and learning in South African schools. Literature is consistent that (a) language is a crucial means of communication and gaining access to important knowledge and skills, and (b) mother tongue is the only language that promotes effective teaching and learning and that any language, which is not a mother tongue, is a barrier to teaching and learning. In South Africa, there are nine African official languages, but English is the media of instruction used by South African learners, which is a barrier to teaching and learning. This study revealed that using one or two African languages may improve teaching, learning, and the academic performance of the learners, but the problem is how to implement because it will be difficult to use many African languages as media of instruction. The use of nine African languages as media of instruction in South Africa will promote tribalism, which was dominant during the apartheid era, and it will be costly to the government. Therefore, this study supports the use of English as a media of instruction because it will promote unity in South Africa, it will not be costly, and it is an international language.
This article addresses the scarcity of gold-standard annotated corpora for readability assessment in Sesotho, a low-resource language. As a solution, we propose using translated texts to construct a readability-labelled corpus. Specifically, we investigate the feasibility of using Google Translate to translate texts from Sesotho to English and then manually post-editing the texts. We then evaluate the effectiveness of the Google translations by comparing them to the human-post-edited versions. We utilised the Ghent University readability demo to extract the readability levels of both the Google translations and the human-post-edited translations. The translations are then evaluated using three evaluation metrics, namely, BLEU, NIST, and RIBES scores. The translation evaluation results reveal substantial similarities between the machine translations and the corresponding human-post-edited texts. Moreover, the results of the readability assessment and the comparison of text properties demonstrate a high level of consistency between machine translations and human-post-edited texts. These findings suggest that Google Translations show promise in addressing challenges in developing readability-labelled parallel datasets in low-resource languages like Sesotho, highlighting the potential of leveraging machine translation techniques to develop translated corpora for such languages. The evaluation of Google Translations in the context of educational texts in Sesotho and the demonstration of the feasibility and potential of using machine translations for enhancing readability in Sesotho will aid in the quest for developing Sesotho text readability measures.
South Africa has a literacy crisis. The 2021 PIRLS results showed that 81% of South African children in Grade 4 cannot read for meaning, against an international average of 6%. Reasons for this poor result will be discussed in this paper. One of the resources used in schools in the fight against illiteracy is a school dictionary. There are excellent school dictionaries produced in South Africa, but the two complaints from learners are that there are not enough words, and that the dictionaries are too big and heavy to carry to and from school. Electronic dictionaries have been developed and are available online or from publishers. These offer more presentation space for each entry, more storage space for more entries, as well as more support for learners in the form of colour illustrations, audio, hyperlinks, and other features. However, most South African schools are not equipped to provide electronic dictionaries to learners – either on a central class computer, or on tablets. The devices are too expensive, data is costly and unreliable, and electricity is a problem. The solution that I will present is an updated version of a PED, a personal electronic dictionary, which has the capacity of an electronic dictionary, while being small and light enough for learners to carry to and from school. This device would not need data or electricity to run. The sample entries that I will present will be suitable for a PED and have been specially designed to contain more support for learners learning in their second language.
A unit of data or a human subject? The inclusion of marginalised voices and humanising stories from digital archives

Rory du Plessis

University of Pretoria, Pretoria, South Africa

Our “archive fever” has given rise to the creation of digitised archives of non-public records, including prison and medical case files. In the United Kingdom, the Wellcome Collection has digitised the medical case files for several nineteenth-century lunatic asylums (psychiatric hospitals). The case files are available for online viewing and allow a global audience to scrutinise scandalous stories of suffering, as well as to gawk at sensational photographs of patients in the throes of mental anguish. The Wellcome’s digitised content has a Creative Commons (CC BY 4.0) licence that allows users to share or adapt the material “for any purpose”. To this end, the suffering of others, their misery and melancholy, as well as their secrets and stories are freely at our disposal for our own gain. The material can be used for many “purposes”. For example, the public may peer upon the private lives of others to satisfy morbid curiosities or ‘peeping Tom’ motives, the media may look upon the images as source material for the opening sequence of a horror film, and politicians may disseminate the material as propaganda for right-wing interests. For academics, the material has been mined for big data. Scholars in digital humanities have successfully and commendably used the digitised archives to explore nutrition and health, mortality rates, as well as the prevalence of illnesses and the efficacy of various treatments. In this paper, I call for scholars who work with digital archives to move beyond the analysis of big data, to include the analysis of individual lives. Armed with the methodologies from the arts and humanities, we are equipped to see the person and not a unit of data. We can explore their records to present a respectful and affirmative telling of their life stories. Potentially, such a telling may restore their humanity.

Dr Rory du Plessis is a Senior Lecturer in Visual Culture Studies at the School of the Arts, University of Pretoria. He is the co-editor of the academic journal, Image & Text, and author of Pathways of Patients at the Grahamstown Lunatic Asylum, 1890 to 1907 (Pretoria: PULP, 2020). He has pioneered the investigation of photographic records from South African psychiatric facilities as a resource to humanise the subjects who were institutionalised in the late nineteenth and early twentieth centuries.
Developing a code-mixed sentiment analysis dataset of Xitsonga-English music review

Blessing Nkuna\textsuperscript{1}, Thipe I Modipa\textsuperscript{2}, Simon P. Ramalepe\textsuperscript{1}

\textsuperscript{1} Computer Science Department, University of Limpopo, Sovenga, South Africa
\textsuperscript{2} Computer Science Department, University of Limpopo, Sovenga, South Africa; Center for Artificial Intelligence Research (CAIR), Pretoria, South Africa

Sentiment analysis is the process of classifying text emotions as positive, negative or neutral. Code-mixed sentiment analysis refers to the classification of text’s sentiments that contains two or more languages. There are limited studies developed for sentiment analysis on South African code-mixed languages and this is due to the absence of annotated dataset. The purpose of the study was to collect code-mixed text data for the Xitsonga-English language pair. The study collected Xitsonga-English code-mixed comments for music reviews from a YouTube channel. After the data was collected, tokenization using a python library called natural language toolkit was performed. Subsequently, we analyzed the comments for the presence of code-mixing. The collected Xitsonga-English code-mixed data would be suitable to build a sentiment analysis model.

The use of augmented reality in the teaching and learning of isiXhosa poetry

Lukhanyo Elvis Makhenyane

University of Fort Hare, Alice, South Africa

Teaching and learning isiXhosa poetry continues to pose challenges for both teachers and learners in South African basic education. The abstract nature of poetry makes it difficult for both groups to grasp the figurative meanings embedded in each line of the poems. Teachers who rely on rote learning and learners who master cramming find teaching and learning poetry difficult, as these skills offer little or no results in the teaching and learning of poetry. It is against such a backdrop that this paper seeks to investigate the use of augmented reality (AR) in education and how it can assist in the teaching and learning of isiXhosa poetry. The use of AR in language learning has been extensively studied by several scholars. AR is found to enhance learning and decrease learners’ cognitive load. In contrast, some scholars argue that it is not ready for total integration into language classes. Despite strides that have been made in the study of augmented reality in language learning and teaching, there is a paucity of extended research on the use of augmented reality in teaching and learning isiXhosa poetry. In this paper, I will review existing data and examine augmented reality activities and technologies that can be used in the teaching and learning of isiXhosa poetry. This paper will contribute towards improving the teaching and learning of isiXhosa poetry in basic education and assist literature educators in integrating modern technologies in their teaching.
Foregrounding the human in the time of AI: What do we mean by inclusive digital humanities?

Alette Schoon

Rhodes University, Grahamstown, South Africa

This keynote considers the different ways in which we could conceptualize inclusivity within the digital humanities. Digital humanities has always been an interdisciplinary field, inclusive of many different disciplines for exploring language, culture and human spaces through computational means. However, inclusivity needs to be conceptualized as an issue of knowledge as it relates to power, authorship and representation. Since the 2010s there has been a concerted effort to critique the Anglocentric nature of the field and to acknowledge intersectional power imbalances of representation and positionality based on race, gender, class and disability. Challenges to dualistic notions of the digital divide have informed more nuanced notions of the “less connected” and a focus on materiality and infrastructure in understanding digital cultures in the Global South. More recently there has been an acknowledgement of global imbalances of power based on the history of colonialism. A truly inclusive digital humanities approach would therefore mean foregrounding marginalized people and their knowledge systems, approaches we are starting to see in the multilingual knowledge production in the digital humanities in South Africa and elsewhere on the continent. Meanwhile, with the rise of ubiquitous big data systems and artificial intelligence systems trained on northern data and designed for northern infrastructure systems, we are facing further challenges of a new world of digital marginalization. However, arguably the greatest threat is that we are facing new extractive colonial relations as it becomes easier to create knowledge about our countries remotely through big data and artificial intelligence. Remote mapping of our resources, remote analysis of our economies and remote interaction with our publics all create the potential for extractive colonial relationships. As digital humanities scholars situated in the Global South, the Majority World, we need to interrogate assumptions about digital data gathering, digital analysis and the digital distribution of such knowledge. We need to explore how we can create truly inclusive, situated knowledge to understand the world through southern eyes without simply providing data for platforms and AI systems based in the global north to use for extractive purposes. We need to therefore seek out theory from the South to inform the kind of questions we ask and the kind of analysis we do in the digital humanities. This paper relates some of my own work on digital cultures among marginalised South Africans with concepts emerging from the work of Indian scholars Ravi Sundaram and Ranjit Sing, related to notions of “pirate modernity” and “data stories” for a majority world.
Alette Schoon is a senior lecturer in the School of Journalism and Media Studies at Rhodes University. She is the convener of the DigiMethods Africa events, which offer training and discussions around digital media methods for Media Studies researchers on the continent. She recently co-edited a journal edition on African digital media research methods. Alette has published extensively on mobile communications, social media and youth media practices in South Africa. She was part of a research team doing a national study on the “less connected” for the global organisation Making All Voices Count. Alette is a firm believer in interdisciplinary work and has been collaborating on various Science Communication projects. Alette is currently collaborating on a study on youth digital cultures as part of a Mellon funded project on Digitality and Sociality. She has a PhD from UCT that examines the digital culture of marginalized township-based hip hop artists in Makhanda. Alette teaches documentary filmmaking and still actively produces films, most recently a film on the early Black intellectuals of the Eastern Cape and their legacy.

Tuesday 28 November 2023; 15:30–15:45; Theatre

Bringing children’s dictionaries to digital life

Ilana Wilken, Laurette Marais

Council for Scientific and Industrial Research, Pretoria, South Africa

South Africa is facing a literacy crisis, with the latest PIRLS results showing that 8 out of 10 learners cannot read for basic comprehension by the time they leave the foundation phase. In this climate, the development of strategies to assist educators in harnessing the available resources to maximum effect is needed. However, most teaching resources are not digitally available, and even fewer are available in formats that make them readily available for use in natural language applications. The Ngiyaqonda! project aims to provide an interactive, multimodal digital environment within which learners can practise their reading and writing skills. Computational grammars and speech technology are combined in a mobile application to facilitate the transition from oral competency in a language to written competency. In this paper, we show how words from a multilingual dictionary for foundation phase learners can be brought to digital life within the Ngiyaqonda! application to enhance the learning experience of core concepts and vocabulary.

We use the official foundation phase CAPS English-isizulu dictionary (Mbatha et al. 2018) to ensure that the content of the computational grammars is aligned with relevant learning outcomes. The result is a fully parallel, multilingual computational grammar that is aligned at the semantic level, ready to be included in the Ngiyaqonda! application.
Generation of segmented isiZulu text

Sthembiso Mkhwanazi, Laurette Marais

Voice Computing, Council for Scientific and Industrial Research, Pretoria, South Africa

The complex morphology, conjunctive orthography and widespread occurrence of morphophonological alternation in the Nguni languages have given rise to several efforts towards morphological segmentation of tokens of Nguni languages. For supervised methods, annotated data is required, which currently exists as canonically segmented data in the NCHLT corpus and surface segmented data in the Ukwabelana corpus. In this paper, we present a method and segmentation strategy based on a computational grammar for isiZulu. The grammar, which itself has some limitations in processing speed and robustness to unexpected input, is used to create a new set of segmentations for the tokens of the Ukwabelana corpus.

By training various models with the same architecture but on different datasets, we first show that our approach enables us to match the performance of a model trained on pre-existing data. We also show that our approach provides the flexibility to determine a suitable segmentation strategy and to generate data that reflects this strategy.
Integrating Technology in Teaching African Languages in South African Universities: A Call for Digitalisation

Zolile Celiwe Xulu

Sinenhlanhla, University of KwaZulu-Natal, Durban, South Africa

The strategic role of integrating Information and Communication Technologies (ICT) when teaching indigenous languages continues to become increasingly apparent within language planning and policy discourse. The integration of ICT in teaching African languages is a complex and diverse research area, making it challenging to identify common factors that define fundamental methods. The argument put forth is that higher education institutions should invest in implementing continuous and intensive awareness-raising seminars about the value of linguistics, language technology, and practice. This paper aims to investigate a comprehensive plan for emerging digital practices and learning design expertise to enable digital democracy in South African higher education by exploring the various opportunities for integrating technology and African languages. Descriptive themes are developed after an intensive existing literature review and analysis. The Language Management Theory (LMT) guides the paper. The author highlight suggestions to ensure that South Africa meets the 2030 United Nations Sustainable Development Goal number 4, which aims to provide inclusive and quality education for all and promote lifelong learning, primarily using ICTs. By presenting various ICT-based models for education as a transformational approach towards integrating ICTs in teaching African languages, the higher education sector will be revolutionized in the African continent and all developing countries that lack understanding of the power of incorporating technology in teaching and developing native languages. Practice recommendations are also made to ensure successful adaptation to the 4th Industrial Revolution.
Empathic Engagement and Aesthetic Appreciation Between Readers’ Ethnicity and Narratives’ Literary Prestige

Gabriele Vezzani, Simone Rebora

University of Verona, Verona, Italy

Scholars of postcolonial studies have highlighted the role played by identity features in both the production and the reception of literary works. In this paper, we apply computational methods to a corpus of reviews of South-African post-colonial novels, downloaded from the Goodreads platform, in order to assess the influence of sociocultural and intersectional factors on the level of appreciation and identification potential of narratives. In particular, we investigate the effect, on the one hand, of the reader’s ethnicity and, on the other, of the work’s literary prestige on the appreciation and the empathic transportation elicited by narratives in the reader. To operationalize our hypotheses, we collected information on the reviewers’ country of provenance (self-declared by Goodreads users) and on the book’s critical appreciation (via either the award of or the nomination for a literary prize). Such information was compared with: (a) Goodreads star rating scores, indicative of success in the online reading community; (b) usage of empathy lexicon (identified via the Linguistic Inquiry and Word Count tool – in short LIWC), indicative of the reader’s identification in the narrative. Results indicate that readers typically empathize more with works that reflect themes from their own country and tend to award them with slightly higher ratings. Furthermore, we found that critically appreciated books, though collecting higher ratings, elicit a smaller empathic response in the reader than those that did not win or were not nominated for any literary prize.
Re-discovering narratives of South African Defence Force servicemen through the informal digital archive

Thomas Hartley

Nelson Mandela University, Gqeberha, South Africa

The South African Defence Force (SADF) has become a point of contention in post-Apartheid South African public memory. From 1966 until 1989, approximately 600,000 white males were conscripted into the SADF to fight in conflicts around Southern Africa as well as at home in South Africa. While much academic work has been done on the SADF during the latter half of the Apartheid era, it is filled with rampant apologia relating to the actions of the SADF as well as the narratives of those that served within it. The stories and experiences of SADF conscripts and soldiers has essentially been ‘sanitized’ by academics and authors attempting to make them suitable for the post-Apartheid era. Yet, on internet forums and social media websites, many SADF veterans have found a space to express their narratives freely without the input of reconciliation conscious reviewers. In this informal digital space, a plethora of material has been deposited by these ex-servicemen which now serves as a digital archive from which researchers can gain valuable insight into the actions and experiences of SADF veterans. The unfiltered narratives found in this informal digital archive shines new light on the current academic understanding of the SADF. Instead of the narrative pushed by many academics and authors of young men filled with remorse for fighting a war they understood little about, this material tells a different story. White supremacism, braggadocio and light-hearted discussion on war crimes committed by the SADF fill these digital spaces, creating a counter-narrative to the apologetic stance of many historians and sociologists who have written extensively on the Border War. This paper will explore some of these informal digital archives and seek to answer not only why SADF veterans feel comfortable expressing their narratives freely in the digital space, but also why they have been largely ignored by mainstream academia.
Advocating for the Digitization of the History of China-Africa Diplomatic Relations

Li Chensi¹, Chen Xi²

¹ University of Cambridge, Cambridge, United Kingdom
² School of International and Public Affairs, Jilin University, Changchun, China

This article delves into the examination of research pertaining to the historical establishment of diplomatic relations between China and African countries, intersecting with the domain of historical digitization, focusing on the fusion of oral history and the digital preservation of historical documents. After underscoring the significance of investigating the history of the establishment of diplomatic relations between China and African nations, the study conducts a literature review, delving into the status quo of historical digitization research in both Chinese and African academies with both sides’ current study on each other’s history and Sino-African relations, thereby furnishing a robust technical and scholarly groundwork for this research. Afterward, the article deliberates upon the prospects and challenges intrinsic to digitizing the history surrounding the initiation of diplomatic relations between China and Africa. Conclusively, the article proffers recommendations aimed at catalyzing the digitization trajectory of this historical narrative, spanning two tiers, including the official multilateral cooperation mechanism and collaborative endeavors involving private academic institutions.

Cultivating a Cybersafety Culture in Grade R Children: The CyberSmart Squad!

Noluxolo Gcaza, Kerry-Lynn Thomson, Nomfundo Khumalo

Nelson Mandela University, Gqeberha, South Africa

As we live in an interconnected world, young children’s internet exposure raises safety concerns, including inappropriate content and cyberbullying. Research suggests that cultivating a cybersafety culture at an early age can significantly enhance a child’s ability to recognise and respond to online dangers. Furthermore, this approach equips children with crucial digital literacy skills and fosters a sense of responsibility and empowerment in their digital interactions. Collaboration between CRICS researchers and a digital animator from the Department of Media and Communications has led to The CyberSmart Squad – a group of animated characters based on the Big Five in South Africa. Using animated characters to teach essential cyber safety to Grade R learners, the project emphasises proactive, age-appropriate education to mitigate online risks. A Pilot Project is being run in 2023, with the aim of implementing the course materials in multiple Grade R schools in 2024. It is envisioned that future work on the project will entail engagement and collaboration with advisors from the Faculty of Education and the Psychology Department. This panel aims to explore online dangers, the collaborative work of partnering departments, and the innovative use of animation as a tool for education and dialogue.
Digitalising indigenous South African languages through bilingualised dictionaries: An open access app

Celimpilo Dladla, Alice Leal, Hlongwana Colfar, Godfrey Mabunda, Asanda Mzizi

University of Witwatersrand, Johannesburg, South Africa

Ranalli and Nurmukhamedov (2014) and Charamba (2017) found that dictionaries can assist students in comprehending scientific and epistemological concepts more clearly. It has been observed that there is a shortage of resources in South African languages that were previously marginalized (Atkins, 1996). Multifunctional dictionaries have been identified as a need seventeen years ago by Mongwe (2006). However, there is still a lack of multifunctional lexicographic projects. While some terminology development projects have been undertaken in Southern Africa as stated by Khumalo (2017) and Nkomo (2019); there is still a significant need for bilingual dictionaries that provide comprehensive definitions of these terms in previously marginalized languages. Developing domain-specific dictionaries, as Gouws (2012) proposed, would help bridge the terminology gap identified in these languages.

Subsequently, the Department of Translation and Interpreting Studies at Wits University has embarked on a lexicographic project that involves creating two bilingual dictionaries that will be available through an open-access application. The project aims to create two dictionaries: one for isiZulu financial terminology and the other for Xitsonga general terms and concepts used in Southern Africa. The Xitsonga dictionary will be developed by collecting terms and concepts in various fields due to limited online resources for Xitsonga (Mabasa, 2007) – the project will prioritize general language aspects over specific linguistic realms. We have chosen the digital option as it is beneficial for cross-referencing and enables easy access (De Schryver and Wilkes, 2008). This project will enhance the availability of open-access digital resources, thus promoting accessibility and contributing to the advancement of indigenous African languages in Southern Africa.

References


Research data management and curation in the digital humanities in Southern Africa: initial thoughts from a current study

Michelle Kahn, Karin De Jager

University of Cape Town, Cape Town, South Africa

In the broader humanities, there is a lack of clarity around what ‘research data’ is (Thoegersen, 2018 and others) and, where data curation is being exercised, it is done according to generic practices or those borrowed from other fields (Borgman, 2015). Uncertainty about data-related concepts or a lack of information about appropriate data practices can be detrimental to good research data management (RDM) (Tenopir et al., 2018). Each discipline requires its own solution to data management that would work for its context.

This current PhD study entitled ‘Research data management and curation in the digital humanities in Southern Africa: a grounded theory study’ (University of Cape Town ethics clearance number UCTDKIS202204-05) explores what ‘research data’ means to researchers in the digital humanities and intends to map existing data management and curation practices of digital humanities researchers.

The study is qualitative in nature, collecting data via in-depth interviews where participants’ views, experiences and practices are being explored. Asking researchers about their own research processes and thus understanding their actual behaviours when it comes to data management is key to understanding what solutions are needed (Tenopir et al., 2020). This presentation will report on some initial findings.

Analysis of the data from the first round of interviews shows that researchers are engaged in digital humanities research for different reasons. Reasons include the opportunity to engage with larger amounts of data than in traditional humanities research; being able to pose different research questions or look at the same research questions from a different perspective because of these larger datasets and/or the use of computational technologies; and simply the excitement of engaging in a relatively new field of research where it is possible to explore new ways of carrying out research.

In initial interviews, participants indicated an eagerness to broaden their research by working alongside other disciplines for the sake of investigating the same research problem. They showed a willingness to partner with researchers from other disciplines such as Information Systems or with experts in information management such as the library.

Although some data management practices have been discovered in the interviews, more data collection needs to take place before findings can be discussed fully – especially considering our digital humanities community is made up of diverse voices and diverse practices from different home disciplines. It is, however, apparent from initial interviews that the interdisciplinary, collaborative and experimental values espoused in the digital humanities literature (by Spiro, 2012; Poole, 2013; Luhmann and Burghardt, 2021, and others) are present in the community. This evidence has positive implications for research data management where openness, sharing and access are important.

These are initial thoughts only and are currently being explored in the research. The conference paper will present the study’s approach to data collection and elaborate on preliminary findings. Ultimately, the study will develop an explicitly designed RDM model for the digital humanities community of Southern Africa which will be linked to this community’s views and practices. Among
other aims, it is hoped the study will provide our digital humanities community with a better understanding of data, of the importance and possibilities of data sharing and reuse, and of the phenomenon and importance of data curation in the academic domain.

References
Beyond Fandom: An Introduction to Fan Studies & Exploration of Non-Western Perspectives

Natalie Le Clue, Janelle Vermaak-Griessel, Janelle

Nelson Mandela University, Gqeberha, South Africa

Fan studies has emerged as a significant field of academic inquiry, addressing the complex dynamics of fan culture and its broader implications. As such, this presentation provides a concise exploration of fan studies, its historical development, key concepts, methodologies, and current issues. Beginning with an introduction, the presentation emphasizes the importance of studying fandom and its relevance in contemporary society. The historical context will highlight the origins of fan studies (Fiske, 2002; Jenson 1992; Jenkins, 1992 & 2006), tracing the growth of fandom and academic interest in the subject.

Key concepts in fan studies, including participatory culture (Jenkins, 2006), fan fiction, and transformative works, are introduced, highlighting their influence on fan engagement and creativity. Methodologies utilized in fan studies research, such as ethnography, content analysis, and discourse analysis, are discussed. These methodologies provide valuable tools to understand fan communities, behaviours, and cultural practices.

The presentation will also showcase case studies that exemplify the diversity of fan studies research. Notably, it explores the co-opting of morals in online political fandom (Le Clue, 2023) and an investigation fans’ perceptions of feminism in the Marvel Cinematic Universe (LeClue & Vermaak-Griessel, 2022), which provides insights into the intersection of popular culture, gender representation, and fan interpretations.

Conclusion
Current issues and debates with fan studies are addressed, with a specific focus on race, gender, and representation. The significance of incorporating non-Western perspectives will be emphasized, challenging the dominance of Western cultural norms in academic research and advocating for cultural inclusivity.

In summary, this presentation encapsulates the foundations, methodologies, and current discussions within fan studies, offering insights into the multifaceted realm of fan culture and its wider societal implications.

Acknowledgements
The submission is an original submission that has not been submitted elsewhere should it be accepted for this conference.

References


Language and Identity: Identity expression in language use by amaXhosa on YouTube

Nkazimlo Ngcungca

Nelson Mandela University, Gqeberha, South Africa

Many people from different linguistic backgrounds interact on YouTube. This study explores linguistic patterns that can be used to identify people from different linguistic backgrounds while paying special attention to isiXhosa. The study is premised on the assumption that individuals including but not limited to amaXhosa[1], might find themselves needing to express their linguistic and cultural identities on YouTube comments using specific linguistic strategies. In the analysis, we will use the theory of performativity (Butler 1999, 2011). Specifically, we will use the conceptualisation of Pennycook (2007). In this way, this theory serves as a lens through which to understand how language usage becomes a performative expression of identity that is achieved using linguistic strategies which assert the speakers' identity.

The research will employ a mixed-method approach, combining qualitative and quantitative data collection and analysis to study YouTube comments on videos featuring amaXhosa-related content. Specifically, comments will be analysed for language use patterns that reveal the identity of the commentator as an isiXhosa language user. A few steps will be followed in the collection of data. First, at least 10 videos will be selected. Second, a YouTube API will be used for mining the comments using Python 3. The YouTube video comments dataset will be made available on the South African Centre for Digital Language Resources[2]. Third, the National Centre for Human Language Technology (NCHLT) language identifier (Duvenhage et al. 2017) will be used to identify languages used in the comments. In the end, only videos using English and isiXhosa will be selected for further analysis in the study.

In the second stage, the results from the analysis of the video comments will inform the participant selection criteria for the empirical research involving interviews. To enable the second step, ethical clearance will be sought from Nelson Mandela University. Identified participants will then be interviewed. This interview dataset will allow us to interrogate the meaning of these experiences, including why participants use certain language patterns. Both the comment and interview data will be subjected to content and critical discourse analysis. This method of data collection is illustrated by the decision tree in Figure 1. The proposed study will not only contribute to the understanding of language practices but also shed light on the dynamic nature of identity expression on YouTube. The findings of the proposed study will provide insights into the ways in which amaXhosa individuals express their isiXhosa linguistic identities within social spaces that are dominated by the use of English.

Notes
1: AmaXhosa are people who speak isiXhosa, one of South Africa's twelve official languages. In a singular form, it is expressed as umXhosa
2: repo.sadilar.org

Acknowledgements
This submission is part of my Master of Arts dissertation at Nelson Mandela University. Dr. Sharon Rudman and Johannes Sibeko are providing supervision for this study. Currently, the research is in
the proposal stage, and we are awaiting ethical clearance.

Proposal approval

Video Selection

Are video comments accessible?

No

Yes

Halting Research

YouTube Comment Mining

Language Identification

IsiXhosa or English?

Yes

Content and CDA

Ethical Clearance

End

Halt Research

Not Granted

Participant Identification

Interviews

Not Granted

End

Discourse Analysis of Interview Speech Data

Figure 1: Decision Tree for Research Process

References


Preserving a community: Situating the Jewish Living Archive in the Global South

Kathrine Garrun
University of Cape Town, Kaplan Centre for Jewish Studies, Cape Town, South Africa

The Jewish Living Archive, a cross-repository, cross-institution project, includes the only institution actively collecting Jewish physical archival materials at the University of Cape Town along with AtoM-based, newly relaunched https://sajmarchives.com/ hosted by the South African Jewish Museum. This project functions to preserve and provide open access to archival materials, meticulously kept for generations. While these materials may be considered primarily of Jewish interest, themes of broad interest such as migration, resilience, religion, human rights, Apartheid, domesticity, ethnicity, among many others all aid to illuminate the past in South Africa. The challenges we face, include the very real risk to paper archives and necessity for digitisation as well as the complex nuances and sensitives of a web-based memory system.

Exploring ASR fine-tuning on limited domain-specific data for low-resource languages

Franco Mak, Avashna Govender, Jaco Badenhorst
Voice Computing Research Group, CSIR Next Generation Enterprises and Institutions Cluster, Pretoria, South Africa

The majority of South Africa’s eleven languages are low-resourced, posing a major challenge to Automatic Speech Recognition (ASR) development. Modern ASR systems require an extensive amount of data that is extremely difficult to find for low-resourced languages. In addition, available speech and text corpora for these languages predominantly revolve around government, political and biblical content. Consequently, this hinders the ability of ASR systems developed for these languages to perform well especially when evaluating data outside of these domains. To alleviate this problem, the Icefall Kaldi II toolkit introduced new transformer model scripts, facilitating the adaptation of pre-trained models using limited adaptation data. In this paper, we explored the technique of using pre-trained ASR models in a domain where more data is available (government data) and adapted it to an entirely different domain with limited data (broadcast news data). The objective was to assess whether such techniques can surpass the accuracy of prior ASR models developed for these languages. Our results showed that the Conformer connectionist temporal classification (CTC) model obtained lower word error rates by a large margin in comparison to previous TDNN-F models evaluated on the same datasets. This research signifies a step forward in mitigating data scarcity challenges and enhancing ASR performance for low-resourced languages in South Africa.
Algorithm for assisting grammarians when extracting phonological conditioning rules for Nguni languages

Zola Mahlaza¹, Langa Khumalo²

¹ Department of Computer Science, University of Cape Town, Cape Town, South Africa
² SADiLaR, North-West University, Potchefstroom, South Africa

Text generation models, the core technology that underpins chatbots such as ChatGPT [1], that are created to support morphologically complex African languages require the modelling of sub-word processes such as phonological conditioning. Since we rely on explicit phonological conditioning rules that are manually identified by grammarians to determine the extent to which such models are able to perform for such languages, there is a need to assist grammarians via computational solutions to increase their coverage of known rules. At present, there are no existing algorithms to extract the rules for such processes and therefore enable the creation of building better text generation models. We present a new algorithm for extracting phonological conditioning rules for Nguni languages. All the rules extracted by the algorithm are valid when the input word and associated morphemes are judged to be valid. The algorithm has the potential to improve the productivity of grammarians and enable the creation of modern text generation technologies that support and promote under-resourced languages.

The Role of Social Media in Xenophobic Attack in South Africa

Mpho Raborife¹, Blessing Ogbuokiri², Kehinde Aruleba³

¹ University of Johannesburg, Johannesburg, South Africa ² York University, Toronto, Canada. ³ University of Leicester, Leicester, United Kingdom

Xenophobia is a pressing issue in South Africa, with frequent instances of violence against immigrants. With the rise of social media, platforms like Twitter reflect public sentiment on this matter. This study examines tweets from 2017 to 2022 about xenophobia in South Africa, using NLP, sentiment analysis, and machine learning to understand public feelings and predict potential xenophobic incidents. The findings aim to help policymakers devise strategies to enhance social cohesion and promote a more inclusive society.
A Minimal Computing Approach to Southern African Language Resources

Ruramisai Charumbira, William J. Turkel

Department of History, The University of Western Ontario, Ontario, Canada

This new collaboration between a historian of Southern Africa (RC) and a specialist in computational methods (WJT), is designed to draw on our respective backgrounds and provide opportunities to enlist students and other collaborators in research and teaching. Our goal is to create tools that can be used to help explain unfamiliar languaging in historical contexts. We follow the tenets of minimal computing (Risam & Gil 2022) and take the perspective of language as a complex adaptive system (Kretzschmar 2015). We also situate our work within the postcolonial digital humanities generally (Risam 2018) and the specific critique of knowledge production and racism that Fields & Fields (2012, pp. 5-6) identified as 'racecraft', which "highlights the ability of pre- or non-scientific modes of thought to hijack the minds of the scientifically literate". As practitioners of academic language research and computing, we must be attentive to the history of colonizers trying to not only kill 'native languages' but their speakers and cultures (Ngũgĩ wa Thiong'o 2009). To date, we have partially implemented one prototype for automating interlinear morphemic glossing of chiShona and English as shown in Figure 1 (Charumbira et al 2023). Here our intent is speculative design: to imagine a more inclusive space of computational tools and practices that jettisons some of the assumptions that have shaped the digital cultural record in the Global North.
This paper presents a current MA study that addresses the research problem, “What issues and insights about the role of digital archives in the preservation of South African cultural history are raised via the production of an archival documentary and archival website on the life and art of the late sculptor Mr. Bonginkosi Michael Gasa?”. This study hopes to show, through the presentation of research and archival material curated thus far, not only the importance of the role archival documentary film and the digital platform play in the preservation of heritage but also how this archival project promotes the idea of an African gaze, which is essential for preserving an authentic cultural voice and heritage. This study is conducted by following a practice-led slant, meaning the research primarily leads to new information about the practice. In this case, the practice will investigate the key elements that go into the production of an archival documentary and secondly the digital archiving of the project online. Mr Bonginkosi Michael Gasa was a sculptor who passed away on the 18th of April 2019 at the age of 55. The film about Mr. Gasa will be reported in a critical reflexive MA dissertation, which will also serve to elucidate the critical, theoretical, and cultural matrix from which the film emerges. The documentary film will be preserved on a website, which will also serve as an online repository, curation, and record of Mr. Gasa’s sculptures. In detailing the study thus far, this paper aims to highlight the potential of digital archives to preserve marginalized voices, such as Michael Bonginkosi Gasa, whose life and work would otherwise remain largely unknown. Moreso, this paper and study hope to show that archives exist to be used for present and future generations, and in this way, to preserve our national heritage.
Investigating the Role of Digital Arts in Decolonizing Knowledge and Promoting Indigenous Standpoints

Richard Asiedu¹, Michelle Stewart², Sfundo Cele²

¹ University of KwaZulu Natal, Durban, South Africa; Koforidua Technical University, Koforidua, Ghana
² University of KwaZulu Natal, Durban, South Africa

Preliminary studies indicate that African educational systems reflected their socio-cultural being, and fit into the moral, economic and physical developments of its generation before colonial inception. Marker (2011) noted that education is one of the significant tools for colonial exploitation in Africa. Even in this post-colonial era, the contemporary African education or knowledge system is predominantly centered on foreign educational structures and standpoints. This undermines or alters the focus of African belief systems and culture. Africans must preserve and promote their traditional knowledge-based system regardless of its co-existence with foreign education in order to sustain and restore their self-respect and total emancipation. In order to elevate the rich cultural heritage of Africans and to promote the indigenous perspective, there must be a paradigm shift from foreign epistemologies to a decolonized knowledge-based system. Decolonizing knowledge is an effort to theorize one traditional knowledge system and entrench into the imposed foreign epistemology theories and interpretations in order to promote indigenous standpoints. According to Dreyer (2017), it seeks to construct and legitimize other knowledge systems by exploring alternate epistemologies, ontologies, and methodologies. The purpose of this paper is to explore the role of visual narratives/digital storytelling within Digital Arts in decolonizing knowledge and promoting indigenous African cultures and viewpoints. An exploratory research approach through a narrative literature review was utilized to come out with scholarly suggestions from the stance of digital arts researchers. Additionally, an oral interview was conducted to seek views from Digital Arts professionals and researchers.
Towards Including South African Hansard Papers in the ParlaMint schema

Maciej Ogrodniczuk

Institute of Computer Science Polish Academy of Sciences, Warszawa, Poland

The ParlaMint project, a CLARIN flagship initiative, seeks to standardize the representation of parliamentary data across diverse languages and regions. Version 3.0 of ParlaMint encompasses corpora from 26 European countries and autonomous regions, available for download and search under the CC-BY license. These corpora adhere to a common XML encoding schema, ensuring interoperability. This study evaluates the feasibility of applying the ParlaMint schema to the proceedings of the Parliament of the Republic of South Africa. Through the conversion of a randomly selected parliamentary session, we scrutinize how various elements are modelled, delineating the steps required to initiate a comprehensive encoding endeavour.

The experiment starts with data retrieval by downloading Hansard records from the South African Parliament website. An English session was selected to streamline processing for non-South African researchers. The original format consisted of session headers, metadata, introductory messages, and debate records. Speeches were identified by uppercase headers and segmented into paragraphs.

Transcript conversion entailed extracting data from the PDF, eliminating technical elements, and ensuring continuity of utterances. Speaker names and functions were identified, and the session was transformed into ParlaMint-compliant TEI XML format. Meta-comments, including applause, laughter, and interruptions, were categorized based on typical phrases. Quotations, marked with indentation in the original transcript, were manually encoded as TEI elements. Foreign-language fragments were treated as gaps, with English translations provided. Multi-paragraph foreign utterances were encoded paragraph by paragraph.

Speaker metadata was stored in separate XML files, listing organizations and individual speakers. Speaker names and roles were converted into XML IDs, and web pages were linked for additional information. Speaker type was designated based on metadata, distinguishing between chairs, guests, and regular speakers.

The encoded session comprised 95 utterances, with varying distributions among speakers. The proposed conversion process serves as a starting point for the larger endeavour of encoding South African parliamentary data in the ParlaMint schema. While not exhaustive, this study lays the groundwork for expanding the ParlaMint dataset to include African parliamentary records.
Uncovering Media Bias in Eviction Reporting: A Comprehensive Analysis Utilising Sentiment Analysis Framework and Social Media Data

Ronny Mabokela Koena¹, Mpho Primus², Linda Mahlobo¹

¹ Applied Information Systems, University of Johannesburg, Johannesburg, South Africa
² Institute for Intelligent Systems, University of Johannesburg, Johannesburg, South Africa

This study investigates the prevalence of evictions in South Africa and examines potential disparities between traditional media reporting and social media discourse. Employing a sentiment analysis framework, we extend its application to compare the reporting of evictions in newspaper articles (i.e. conventional media) and Twitter data (i.e. social media). Statistical machine-learning methods are utilized to predict sentiment scores for both types of content, and a chi-square test is employed to evaluate bias between news articles and tweets. The test results reveal a significant bias in the sentiment distribution, suggesting that the dissimilarities observed between articles and tweets are not merely coincidental.
Digital Humanities, as a field of study and research but also a professional field, has seen immense growth over the four-plus decades. The use of computational methods such as imaging and databases to collect, preserve and distribute data has led to immense accessibility to data. Through the development of digital archives and databases, for example, people from everywhere are able to access information in real-time. Databases even assist one in accessing curated information, filtered based on a subject matter. With the advances in machine learning (ML), data science and artificial intelligence, it is anticipated that developments and capacities in the field will go beyond just capturing, persevering and distributing data. These new developments promise to provide capabilities that will be able to manipulate, reformulate, and even recreate data beyond human comprehension or desire. As we speak, programs such as Deepfake can create video speeches of people based on available images, voice and clips online; some applications compose music and generative AI that can write ‘academic’ papers. These technological advances have introduced new ways to make things happen, and these new capabilities will surely disrupt the field as we know it. With these new capabilities come newly imagined ethical challenges. Ethical challenges associated with AI, Big Data and ML include bias, opacity, manipulation, and privacy, to name a few. In this talk, I wish to highlight these ethical challenges, not to scare us off but with the hopes that we can develop a framework for the responsible use of ICT-mediated technologies.

Karabo Maiyane is a lecturer in Philosophy at Nelson Mandela University. His teaching expertise includes moral and political philosophy, history of philosophy and African philosophy. He is a doctoral candidate at the University of Pretoria. His research focus is on the ethics of artificial intelligence. He is interested in the impact of human dignity by AI technologies in the context of the Just War Theory. His other interests are human and AI ethics of care as well as African ethics in general. He has two forthcoming book chapters on Autonomous Weapons and warfare in Africa and the impact of eldercare robotics on human dignity.
Automated hate speech detection in a low-resource environment

Ethan Roberts

University of Cape Town, Cape Town, South Africa

The problem of hate speech on social media is a growing concern. Much work has been done to tackle online hate including work into the automated detection of hate speech. The problem of automated hate speech detection at scale, however, remains by and large unsolved. This is in part due to the difficulty of classifying short texts without contextual information, difficulties in ensuring consistent annotation quality, contextual differences in different regions and social settings, and the informal and nuanced language used on social media. Automated detection of hate speech is made all the more difficult in low-resource regions for which large existing hate speech corpora are unavailable. Here, I present a sampling framework to tackle some of these challenges. The framework uses sequential data annotation phases, each allowing for the training of a hate speech filter that further refines our ability to collect useful data in subsequent phases. This framework is implemented for two phases on Twitter data collected around discourses in South Africa, and its efficacy assessed through a cross-dataset analysis between phases, as well as an analysis to determine the classification performance of decision tree-based methods on relatively small datasets. I conclude that this framework is a viable approach for curating hate speech corpora for automated hate speech detection in a low-resource setting.
Towards an Inclusive and Accessible Digital Scholarly Editing: A Critical Assessment

Anna Cappellotto¹, Raffaele Cioffi²

¹ University of Verona, Verona, Italy
² University of Turin, Turin, Italy

This paper is based on an ongoing project on Diversity, Inclusivity, Accessibility in Digital Scholarly Editing (DIA-DSE) and in our view it should be seen as a place of critical assessment of existing digital scholarly editions (DSE) and discussion for future developments and improvement. Our idea is the result of a bigger initiative based at the University of Verona (Italy) on the topic Inclusive Humanities: Perspectives of Development in Research and Teaching Foreign Languages and Literatures [1]. In its essence it tries to respond to some of the goals envisaged by globally relevant agendas and strategic plans which put in the foreground the challenges posed by our time and focuses on the idea that a knowledge society like ours needs to develop an open model of science. This novel model pleads for an accessible science and through innovative methodologies seeks to involve wide, inclusive and diverse agents, contents, and targets into the scientific discourse.

In this context, our aim is to investigate from the perspective of Diversity, Inclusivity and Accessibility (which we call by the acronym DIA) a traditional field of study, that is philology and textual criticism, in its very ultimate development: Digital Scholarly Editions (DSE). The field of DSEs raises nowadays the following questions: Do DSE projects consider Diversity, Inclusivity and Accessibility? If so, how much and how do they do this?

To try to provide an answer, in the context of DIA-DSE project we will build a corpus of existing resources and we will try to assess their DIA degree according to different parameters. In the long term, after data collection and analysis, a ranking of diverse, inclusive and accessible resources will be defined. These results will be followed by a survey that will be disseminated among the scholarly community and users, with the objective engage in an open critical discussion, to raise awareness and to gain suggestions for the creation of DIA-DSE guidelines that will be published and promoted at the end of the project.
**Using computational tools for translating text (Autshumato)**

**Laurinda van Tonder**

Applied Linguistics, University of Johannesburg, Johannesburg, South Africa

**Objectives:** The workshop aims to introduce participants to using computational methods to assist translation activities. At the end of the session, participants will be able to use the Autshumato ITE as a tool to do translations on their own laptops.

**Topics:**

- What is Autshumato and who is CTexT
- What not to expect
- Getting started with Autshumato ITE – Translation of test documents

**Target audience:** Language practitioners, team members of language units, students interested in translation studies, researchers, scholars, linguists and lecturers.

After following this workshop, you will be able to perform the following actions:

- Open documents and save translated documents in original format (e.g. on a letterhead)
- Define source and target languages
- Use tags (to keep formatting such as bold or italic text)
- Translate text in easily editable ‘chunks’ (sentences or paragraphs)
- Build up glossaries (lists of previously translated words)
- Access the translation memory (larger segments of previously translated texts)
- Insert diacritics (special characters used in some languages).

**Format:** The workshop will provide a combination of presentations, demos and practical hands-on exercises.

**Max capacity:** 30 participants

**Required resources:** What to bring: A laptop
Modern rule-based NLP for the South African Bantu languages

Laurette Marais¹, Laurette Pretorius²

¹ Voice Computing Research Group, Council for Scientific and Industrial Research, Pretoria, South Africa; ² Stellenbosch University, Stellenbosch, South Africa

Objectives: While large language models (LLMs) are now the state-of-the-art in natural language processing (NLP) worldwide, most languages in South Africa are not only severely under-resourced, but also present unique modelling challenges due to their agglutinating morphology, with the result that LLMs remain out of reach for these languages. Modern rule-based approaches are uniquely positioned to “stand in the gap”, as it were, and provide the ability to include our languages in the digital space despite the unique challenges they face.

Topics: In this workshop, we present a brief overview of the current state-of-the-art in rule-based NLP as it is applied to the South African Bantu languages. Rule-based NLP is introduced within the broader NLP context, and the linguistic features of the South African Bantu languages are presented in order to highlight the challenges they present to NLP. Finite state transducers are presented as an effective formalism for modelling Bantu language morphology, with examples drawn from the implementation of isiZulu morphology in the FOMA framework.

In order to model both morphology and syntax, perhaps more accurately referred to simply as morphosyntax, Grammatical Framework (GF) is introduced, which is a formalism and programming language for the development of multilingual computational grammars. The workshop includes the systematic development of a computational grammar which implements a small language fragment in order to show how agreement and inflection/derivation is modelled using GF. The final two lectures are dedicated to a group project in which participants contribute implementations of the same fragment in their own language or a Bantu language of their choice, resulting in a multilingual Bantu language grammar for simple sentences.

Target audience: This workshop is aimed at anyone who wishes to learn about and gain hands-on experience in rule-based NLP within the South African context. While programming in GF (a functional programming language) will form part of the last two lectures of the workshop, programming skills are not a prerequisite. Participants with either a computational or a linguistic background are invited to attend the workshop.

Format: The workshop will take the form of 10 30-minute lectures, with the final two lectures dedicated to a group project. Lectures may be grouped in pairs if necessary.

Required resources: Each participant who wishes to contribute to the group project should have access to a laptop. If possible, participants should have Python 3 installed, although help will be provided in this regard by the presenters. An internet connection will also be required to install the “pgf” Python package via pip, and Github (or a similar platform) will be used to coordinate the group project.
Digitisation and Preserving of Textual Data

Benito Trollip, Rooweither Mabuya

South African Centre for Digital Language Resources, Potchefstroom, South Africa

Objectives: In this tutorial our aim so introduce participants to digitisation, techniques used to digitise texts, digital preservation practices (that includes data and metadata management), and challenges and solutions when it comes to digitisation. The workshop will conclude with a practical session where participants will work in groups to create a small-scale digitisation and archiving project. This hands-on activity will reinforce the concepts learned throughout the workshop and provide a glimpse into real-world challenges and solutions.

Topics: The basic principles, challenges and possible solutions of and for digitising and (meta)data management will be introduced to the participants.

Target audience: This workshop is designed to cater to librarians, archivists, researchers, educators, and anyone interested in the digitisation and preservation of textual materials.

Format: This tutorial will include a first part with around two hours of interactive presentations, allowing participants to ask questions throughout. The second part will be a hands-on session where participants will digitise texts.

Required resources: Participants should bring text samples (no more than three pages) to digitise.
Boost your skills to search (and more) in text

**Menno van Zaanen**

South African Centre for Digital Language Resources, Potchefstroom, South Africa

**Objectives:** In this tutorial we will take a look at some fundamental skills that will get you started on your journey with text mining. To kick off, we will learn how to tell the computer what to search for. We will start out with simple search operations and explore their limitations. After that, we will look at more complex search operations. We will also introduce the first data wrangling steps for example converting text data into other formats for further processing.

**Topics:** First we will look at how a computer searches in a text. We then cover relatively simple searching in documents and identify the limits of that. This is followed by an explanation of more complex search operations, which are followed by practical exercises. We end with reasoning about complex search and replace operations (and potentially a brief explanation of the theory behind this).

**Target audience:** This tutorial is for people who want to improve their search skill. It is accessible to humanities and social sciences students and researchers with no prior exposure to programming. We will not be covering any advanced text mining strategies or tools. Skills learned will be applicable in other aspects of research such as well, e.g. literature reviews.

**Format:** This tutorial will be a three hour lecture (discussing background and theory) and hands-on, practical work.

**Required resources:** Participants should bring a laptop they can work on. No special software is required, we will be using a webbrowser and a PDF viewer. We will be using internet access, which will be provided by the conference organizers.
Useful Information

The conference will be held at Nelson Mandela University’s North Campus Conference Centre, Building 235, Summerstrand, Gqeberha, 6019. The registration will be located in the main foyer.

The presentations take place in the main Theatre or Venue 2 on Monday and Tuesday, and Venue 3 on Wednesday, Thursday and Friday. These are located inside the Conference Centre.

Coffee breaks and lunches will be served in the main foyer.

Wi-Fi will be available during the conference through the eduroam network.

How to get to the conference centre?

From the airport:

- Get onto Allister Miller Drive in the direction of Humewood
- Turn right into La Roche Drive
- Turn right into Strandfontein Road
- By the Spar turn left into Admiralty Way
- Turn right into University Way
- Take the slipway left onto North Campus
- At the security checkpoint ask for directions to the Conference Centre
How to get to the gala dinner location?

The conference gala dinner will be held at the Ocean Sciences Conference Centre. This is building 1102 on the Ocean Sciences campus.
We very much appreciate the input from the following sponsors (in alphabetical order), who made the conference financially feasible.

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