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South African Centre for Digital Language Resources

**ISIZULU: uNhlangulana ka-2022**



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# IKHOPHORA YEZOMLANDO: AMATHUBA OCWANINGO LWAMAREJISTA OSUKU LWE-VOC YE-TRACING HISTORY TRUST

- ngu-Roné Wierenga

Ikhophasi (*corpus*) ye-Tracing History Trust (ngokulandelayo izobe isibizwa ngokuthiwa yikhophasi ye-THT) iyikhophasi yedijithali ehlanganiswe ngokubhalwe ngesandla kudayari yangonyakakhulu we-17 ukuya kowe-18 (1687-1714). Lokhu okufakwe kwidayari kwabhalwa amalungu e-Dutch East India Company futhi kuxoxa izindaba zokuphila kwawo kwa nsuku zonke eKoloni yaseKapa.

Lawa madayari ahlinzeka ngolwazi oluhehayo nolucacile mayelana nempilo nokuphila kwalawa makholonisi (*colonists*)

angamaDashi ogwini lwaseKapa, afake nezincazelo zezinsuku zemakethe, imicimbi kahulumeni neyombusazwe, kanye nobudlelwano phakathi kweminden - yomibili

2 okungowaseNingizimu Afrika nowaseDashi. Le mibhalo ibhalwe ngolimi Lwakudala LwesiBhunu - okungesona isiDashi noma isiBhunu esijwayelekile.

3 Ikhophasi yedijithali, njengekhophasi ye-THT, iyiqoqo elikhulu lemibhalo (okungukuthi yikhophasi) efundeka ngomshini (okungukuthi ingokwedijithali)

6 okwenza kube yinsiza esebeziseka njengensiza yocwaningo. Into enhle ngekhophasi yedijithali wukuthi ayibophelekile endaweni ethile, futhi uyakwazi ukuyihlaziya

8 ngokusebenzia ama-software ahlukahlukene kanti futhi - ezimweni eziningi - abacwaningi bayithola mahhala. Ikhophasi ihlanganisa, phakathi kokunye, amarejista eminden, uhlu

10 lwezinsuku zokuzalwa nezinsuku zokufa, amarejista okuthumela impahla ngemikhumbi namarejista eziggila. Ngalolu lwazi uyakwazi ukwenza ucwaningo olusha nolunobuchule emikhakheni efana

naleyo ephathelene nezizukulwane, i-anthropoloji kanye nesosiyoloji. Mayelana nababhalo bomlando, ikhophasi iyinqolobane yowlazi

ngomlando wezwe laseNingizimu Afrika ngokwendawo nakongokwepolitiki. Inikeza abacwaningi

uhlangothi oluyingqayizivele ngamagugu namasiko aseNingizimu Afrika.

Ukubaluleka kwekhophasi akugcini kuphela ocwaningweni lwezomlando. Ngenxa yokuthi le mibhalo ekudayari yenziwa ngaphambi kokumiswa kwesiBhunu, le khophasi iyinsiza ebalulekile yocwaningo mayelana nokuhlukahlukana kwesipelingi nanokuthuthukiswa kwesipelingi, ucwaningo lwasichazamazwi mayelana nohlelomagama (*i-vocabulary*) yesiBhunu Sakudala, ucwaningo mayelana nesinhekxi ekusetshenzisweni kwasakhiwo somusho kanye nezinye izingxenye zolimi. Okufakiwe kudayari kungase kusetshenziselwe ucwaningo lokuhlonza ababhalo, nokuhlaziya izinkulomo kanye nokwenziwa kwezfundo zokuqhathanisa phakathi kwesiBhunu Sakudala nesiDashi sekhulunyaka we-17. Le khophasi icacisa ngezinto ezintsha mayelana nomphakathini wase-Cape of Good Hope wesikhathi sekhulunyaka we-17 nowe-18. Ikhulumha ngendaba yamatilosi angamaPutukezi kanye nama-Khoi-San ayesevele ahlla eKapa kanye nemvelaphi yekoloni eyagcina ibe yimbangela yokusungulwa kweRiphabhulikhi yaseNingizimu Afrika. Uma udinga olunye ulwazi mayelana nobubanzi bekhophasi, funda u-Liebenberg (2018) noma ufunde ubhekise ku-Wierenga and Breed (2021) njengesibonelo sohlobo locwaningo okungasetshenziswa kulo ikhophasi ye-THT.



### Uhlu Iwamabhuku assetshenzisiwe

Liebenberg, H. 2018. Die Wes-Kaapse Argief en die begin van Afrikaans. *Tydskrif vir Geesteswetenskappe*, 58(2):204-236.

Wierenga, R. & Breed, C.A. 2021. *Diachroniese benadering tot die ontwikkeling van die progressiewe perifrastiese konstruksies in Afrikaans en Nederlands: 'n Korpusondersoek*. *Tydskrif vir Geesteswetenskappe*, 61(2):588-619.

## UKWETHULWA NGOKUSEMTHETHWENI KOHLELO LWEZINGQWELE LWEZINSIZA ZEZEMFUNDO EVULEKILE EMKHAKHENI WEZOBUNTU NGOKWEDIJITHALI

- **ngu-Natalie Simon**

Isikhungo SaseNingizimu Afrika Sezinsiza Zolimi Ngokwedijithali (i-SADiLaR) kanye noSihlalo we-UNESCO weNyuvesi yaseNyakatho-Ntshonalanga (i-NWU) emkhakheni Wokufunda Ngezindlela Eziningi kanye Nezinsiza Zezemfundo Evulekile (ama-OER) bayaziqhenya ngokumemezela ukwamukelwa kokuqala Ohlelweni Lwethu Lwezingqwele zama-OER Emkhakheni Wezobuntu Ngokwedijithali (Digital Humanities).

Lolu hlelo, oluhlinzekwa Ngohlelo Lwezingqwele Ngokwedijithali lwe-ESCALATOR lakwa-SADiLaR, iuhlose ukugqugquzelu ubushoshovu kanye nocwaningo mayelana nokusetshenziswa kanye/noma ukwakhiwa kwama-OER kumkhakha wezobuntu ngokwedijithali emanyuvesi aseNingizimu Afrika.

Kuze kube manje, siyajabula ukumemezela ukuthi sekwamukelwe amaphrojekthi angama-26 kulolu hlelo ngenhloso yokusekela nokuxhasa ngezimali mayelana nokusungulwa nokusetshenziswa kwama-OER emkhakheni wezobuntu ngokwedijithali.

"Njengoba igama lisho, ama-OER ayinoma yiziphi izinsizakufundisa, zokufunda nokucwaninga ezitholakala emphakathini futhi okwaziyo ukuzithola ngaphandle kwenkokhelo, uzisebenzise futhi ukwazi nokuzishintshela kwesinye isimo uphinde ukwazi ukuzisabalalisa kabusha," kusho uSolwazi Jako Olivier, uSihlalo we-NWU UNESCO

we-Multimodal Learning and OER.

"Ama-OER ayithuluzi elibalulekile ekwakhiwenu kwamakhono nobuhlakan emkhakheni wezobuntu ngokwedijithali eNingizimu Afrika njengoba lo mkhakha obalulekile udinga ukuthuthukiswa ukuze ubhekane nezidindo ezithile zezifundiswa emkhakheni wezobuntu eNingizimu Afrika."

"Umkhakha Wezobuntu Ngokwedijithali uwumkhakha wocwaningo omusha eNingizimu Afrika," kusho uSolwazi Menno van Zaanen, onguSolwazi emkhakheni wezobuntu ngokwedijithali kwa-SADiLaR, "Wumkhakha wezobuntu lapho kusetshenziswa khona amathuluzi ekhompyutha ngobubanzi. Ubuchwepheshi bedijithali benza ukuthi abacwaningi emkhakheni wezobuntu kanye nakwezesayensi yezenhlalo bakwazi ukuhlaziya isibalo

**Cofoza lapha  
ukuze ukwazi  
ukusithinta:**





esikhulu sedatha (njengemibhalo), okwenza ukuthi bakwazi ukuphendula imibuzo yocwaningo ngendlela eqondile noma bakwazi ngisho nokuphendula ngokuphelele imibuzo yocwaningo lwenoveli."

Amaphrojekthi angama-26 akhethiwe asatshalaliswa ezikhungweni zonke zaseNingizimu Afrika. Anezinhloso ezingabandakanya ukusetshenziswa kwama-OER ekwethulweni kwezilimi eziningi, ukwakhwa kolwazi oluzimele ngokusebenzia imikhakha ehlukahlukene kwezemfundo yobuntatheli, ukweseka ezemfundo zamarobhothi kwezezilimi zomdabu eNingizimu Afrika, nasekwethulweni komkhakha wezobuntu ngokwedijithali kanye nasekucabangeni ngokwekhompyutha ocwaningweni lwezomthetho. Ezinyangeni ezizayo, i-SADIaR izokhombisa umsebenzi wamaphrojekthi abandakanyekayo kulolo hlelo ezinkundleni zayo ezihlukahlukene.

Ngaphandle kwesibonelelo socwaningo, lolu hlelo lugxile kakhulu ekwakhweni kwamakhono. Ababambiqhaza kulolo hlelo bazokwenza izifundo ezimfushane zama-OER ku-inthanethi, ezihlanganisa izethulo ezethulwa ngobuchwepheshe nangezinkundla zokucobelelana ngolwazi kanye nokwenziwa kwesikhala sokwabelana ngezinqubo ezihamba phambili. Lolu hlelo luzophinde luuhlanganise nokwesekwa kwezingqwele eziemkhakheni wezobuntu ekwenzeni ucwaningo lwenqubo, nasekubambeni iqhaza ezingxoxweni-mpikiswano mayelana nocwaningo olwensiwe yizo kanye nasekushicelelweni komsebenzi wazo. Umphumela obalulekile walolu hlelo wukwakha uchungechunge lwabacwaningi nongoti emkhakheni wezobuntu ngokwedijithali eNingizimu Afrika ukuze kuthuthukiswe lo mkhakha osafufusa.

## Xhumana nathi:



## I-HUNDZULA RETREAT: IVALA IGEBE PHAKATHI KWEZESAYENSI YEKHOMPYUTHA KANYE NEZEZILIMI

- **ngu-Natalie Simon**

I-Afrika iyikhaya lengcebo eningi, kubandakanya izilimi zayo. NgokoHlelo Lwezilimi Zase-Afrika eNyuvesi yase-Harvard, cishe ingxenye eyodwa yokokuthathu yezilimi zomhlaba ivela ezwenikazi lase-Afrika. Inselele yongoti bezilimi base-Afrika kanye nezazi zolimi wukugcina lezo zilimi zisebenza emhlabeni okhulayo ngokohlelo lobudijithali.

I-Hundzula Retreat, yayibanjwe ngoNhlanja ngonyaka ka-2022 eNyuvesi yasePitoli, lapho okwakuhlangene khona izazi zezilimi zase-Afrika kanye nongoti bezokucubungulwa kwezilimi ngokwemvelo emzamweni wokubhidliza imingcele ephakathi kwemikhakha kanye nokugqugquzelu ukusebenzisana okukhulu ukuze kwakhwiwe idijithali yezilimi zomdabu zaseNingizimu Afrika.

Amalungu amane eSikhungo SaseNingizimu Afrika Sezinsiza Zolimi Lwedijithali (i-SADIaR) athamele aphinde enza nezethulo kulengqungquthela. Amalungu kwakuyilawa: u-Rooeweither Mabuya, ongumcwaningi womkhakha wezobuntu (we-DH) onentshisekelo ekhethekile olimini IwesiZulu; u-Andiswa Bukula, ongumcwaningi we-DH onentshisekelo olimini IwesiXhosa;



uMmasibidi Setaka, ongumcwaningi we-DH ogxile olimini lweSuthu; kanye no-Respect Mlambo, ongumcwaningi we-DH ogxile olimini lwe-Xitsonga. UMaruya ubeyingxene ye komiti elihlelayo kanti bobabili yena no-Setaka benza izethulo.

## Ukwakha ukuqonda, ukudiliza imingcele

Ukucutshungulwa kolimi ngokwemvelo (i-NLP) kubandakanya ezelimi, ezesayensi yekhompyutha kanye nobuhlakani bokwenziwa ukuze sikhazi ukuthi senze amakhompyutha enze imisebenzi elusizo ebandakanya ulimi lwabantu. Isayensi Lezilimi wucwaningo mayelana nolimi nesakhiwo salo, okubandakanya okunye phakathi kwakho, okunjengohlelo lolimi, uhlelo lwemisho(isinhekxi) nefonetiki. Nakuba ulimi nesakhiwo salo kubonakala kuhambisana kahle ephepheni, kodwa akuhlangani kahle ngendlela umuntu angacabanga ngayo.

'Nakuba ongoti be-NLP kuyibo abenza amathuluzi asetshenziswa abacwaningi bezezilimi, thina njengezazi zezilimi asazi ukuthi balandele yiphi inqubo, nakuba kubonakala ukuthi kuhona ongoti be-NLP abangakuqondisisi kahle, isibonelo okungaba isinhekxi noma imofoloji yolini,' kusho uBukula.

Amathuluzi akhiwe wongoti be-NLP asukela ku-software etholakala yonke indawo njengezihlolli zesipelingi kuya kumathuluzi akhetheke kakhulu okwenza ucwaningo, njenge-software yokuhlaziya umbhalo.

Okwakugxilwe kuko kakhulu kule ngqungquthela kwakuwuchazwa kabanzi ngale mikhakha emibili ekhethekile. USolwazi u-Vukosi Marivate, onguSihlalo Kwezesayensi Yedatha eNyuvesi yasePitoli, wenza isethulo sesihloko esithi: 'Ukfunda Ngomshini Kwawo Wonke Umuntu - lyini i- 4IR?'. Esethulweni sakhe, akachazanga nje imiqondo ewumnyombo ekufundeni ngomshini kodwa uphinde wachaza nokuthi labo abangekho kulo mkhakha bangahlanganyela kanjani

ekufundeni ngomshini kanti okubaluleke kakhulu kube wukuhanzeka ngendlela yokuthi izazi zezezilimi zingafunda kanjani kabanzi mayelana nokufunda ngomshini. Ezinye izethulo mayelana ne-NLP zihlanganisa 'Isingeniso Sokucubungulwa Kolimi Ngokwemvelo' esenziwe ngu-Jade Abbot, ongunjiniyela wokufunda ngomshini kwa-Retro Rabbit kanye nomxhumanisi we-Masakhane, okuyinhlangano ye-NLP yabantu abasemazingeni aphansi emphakathini.

UMabuya wenze isingeniso ezifundweni zezilimi, lapho ahlahlele khona ukuthi ziyni ezezilimi, wabuye wachaza imikhakha namagatsha ahlukeni alo mkhakha, kanti u-Setaka wethula ngoyle lokwenziwa kwezichazamazwi (i-lexikhografi) mayelana nalezo izilimi ezingenazo izinsizakusebenza ezanele, ngokuba agxile ikakhulukazi mayelana nokubaluleka kwama-NLP kanye nobuchwepheshe bedijithali maqondana nokuhlanganisa kwezichazamazwi ezilimini zomdabu zase-Afrika.

Mayelana nabacwaningi be-SADiLaR lengqungquthela yahlinzeka ngolwazi olujulile nolunothile.

'Okwaba wusizo kimina kwakuwukuqonda ukuthi lawa mathuluzi ekhompyutha akhiwa kanjani, nokuthi ibaluleke kangakanani idatha esetshenziselwa ukuqequesha,' kusho uBukula. 'Manje esikhundleni sokuvele ngichithe ithuluzi ngenxa yokuthi izinga lalo lokunemba liphansi, sengiyabona ukuthi into okumele ngiyenze ukuthi ngilifake idatha yesiXhosa eningi noma ngisebenzisane nongoti we-NLP ngenhlosi yokunikezelwa ngebuyisambiko maqondana nesinhekxi noma nemofoloji.'

UMabuya uthi okunye akuthokozela kakhulu ukuba yingxene yalapho bebehlanganye ngemiqondo khona nabantu abasebasha mayelana nokudingidwa kwendlela yokuvalwa kwegebe phakathi

## Xhumana nathi:





kwezezilimi nokucutshungulwa kolimi ngokwemvelo.

## Ukubeka isisekelo sokusebenzisana

Le ngqungquthela ibifake phakathi nezethulo ezimfushanyana ezenziwe yibo bonke ababambiqhaza. Lezi zethulo ezimfushane zazimayelana nocwaningo lomuntu ngamunye nentshiseko yalowo mcwaningi. Lokhu kwenza ukuthi labo ababekhona kulengqungquthela bakhethe labo abazosebenzisana maqondana namaphrojekthi esikhathi esizayo. UBukula uthi usevele useyasibhala isiphakamiso sokusebenzisana nozakwabo baseNyuvesi yase-Stellenbosch nabaseNyuvesi yase-Limpopo. UMabuya uthi naye ukwazile ukucobelelana ngolwazi nongoti be-NLP abasebenza ngesiZulu.

## Ukuvula umnyango wamathuba maqondana nekhompyutha

Le ngqungquthela isize ekudambiseni ukwesaba okuvamile kubacwaningi emkhakheni wezobuntu ekusetshenzisweni kwekhompyutha. Umkhakha wezobuntu uya ngokuya uba yidijithali futhi akusekho ukubuyela emuva. Amathuluzi ekhompyutha avula iminyango emisha kubacwaningi bezesintu kanti namathuba afana ne-*Hundzula Retreat* asiza abacwaningi bezobuntu ukuthi kube yibo abakubona kuqala lokhu, futhi asikho isidingo sokuthi konke lokhu kumele bazenzele ngokwabo, njengoba bebaningi ochwepheshe bezesayensi yamakhompyutha abakhona abangasebenzisana nabo. Nakuba kunjalo, kuBukula, kuhphinde kwasusa okunye okungaziwa mayelana nokucutshungulwa kolimi ngokwemvelo, kwezesayensi yekhompyutha kanye nasekufundi ngomshini.

'Kukhona izifundo ezibhekene zalabo abaqalayo,' usho kanje. 'Ukufunda lawa makhono okusebenzisa ikhompyutha kufana nokufunda noma yini enye, uqala ekuqaleni, bese uya njalo uthuthuka ngesinyathelo esisodwa ngesikhathi.'

Iseluleko sakhe kubacwaningi nabafundi bezesayensi yesintu: 'Ningocabangi ukuthi lokhu akunilungele nina, kodwa kulungele abanye. Amakhono nezinhlelo zekhompyutha kubaluleke kuyo yonke imikhakha kanye nezesayensi yezenhlalo neyezounru ngokufanayo. Amanyuvesi azobe enzela abafundi bawo ubulungiswa obukhulu uma eqala ukufundisa lawa makhono kusukela emazingeni awo eziq ukuqala.'

## Xhumana nathi:





# UKUBAMBISANA EKUBHALWENI NASEKUQOSHWENI PHANSI KWESIPHUTHI E-LESOTHO: OKUFINGQIWE

- ngu-Natalie Simon

IsiPhuthi, ulimi olukhulunywa yimiphakathi yabaPhuthi eningizimu ye-Lesotho kanye nasesifundazweni esisenyakatho yaseMpumalanga Kapa eNingizimu Afrika, sithathwa njengolimi olusengozini yokushabalala. Inani labantu abakhulumu isiPhuthi e-Lesotho lilinganiselwa kuzi-200 000, kodwa leli nani liya lincipa ngokushesha.

Ukudluliselwa kwalolu limi ezizukulwaneni ngezizukulwane - lapho izingane zithola khona isiPhuthi kubazali bazo nakogogo nomkhulu - kwenzeka kuphela ezigodini ezimbili ezikude zemifula, okuyiDaliwe neSinxondo. Nakuzo lezi zigodi ezimbili, uma abaPhuthi beganwa ngabeSuthu noma ngamaXhosa, kujwayeleke ukuthi isiPhuthi singabe sisakhulunywa ekhaya. Kule mishado exubile, izingane zikhula zikhuluma isiSuthu noma isiXhosa njengolimi lwazo oluqavile.

Ngenhlanhla, ukuqinisekisa ukuthi lolu limi alushabalali, u-Matthias Brenzinger weNyuvesi yaseFreyistata kanye no-Sheena Shah weNyuvesi yaseFreyistata kanye neNyuvesi yase-Hamburg, eJalimane, bebelokhu besebenzisana ukusukela ngo-2016 ekuvuseleleni lolulimi ngokuthi lubhalwe noma luqoshwe phansi.

Ingxenye ebalulekile yalokhu wukusebenzisana nomphakathi okhuluma isiPhuthi, e-Lesotho naseNingizimu Afrika. U-Brenzinger noShah bakholelwka ekutheni laba bantu abakhulumu lolu limi kumele banqume ngaphandle kokuchitha isikhathi ngokuthi ulimi lwabo luzobhalwa noma luzoqoshwa kanjani phansi nokuthi ngubani ozokwenza lokhu.

Le phrokethi ibandakanya ukuqoshwa phansi kwezindaba ezixoxwa ngolimi lwesiPhuthi, nezingxoxo, nezigcawu zemibuzo, nezinganekwane, nomlando oxoxwa ngomlomo kanye

nezinkondlo ukuze kusizakale lesi sizukulwane esikhona njengamanje kanye nezikulwane ezizayo. Ibuye yeseke nokukhiqizwa kwezinsiza ezifana namaphosta okuqwashisa ngezempiro nge-COVID-19 ngesiPhuthi kanye nokushicilelwka kwsichazamazwi esihlanganise izilimi ezine okuyisiPhuthi-isiSuthu-isiXhosa-isiNgisi, kanti leli thimba likholelwka ekutheni lesi sichazamazwi sizoba yisisekelo sokuthuthukiswa kwezinto zokufundisa kanye nokufunda ngolimi lwesiPhuthi.

## Ukusebenzisana nomphakathi, ukuthuthukiswa kwamakhono

NgoLwezi ka-2021, u-Brenzinger kanye no-Shah babamba izinkundla zabo eziwayelekile zokucobelelana ngolwazi mayelana nolimi lapho bebeqequesha khona intsha esencane yabaPhuthi eyisithupha yaseDaliwe naseSinxondo mayelana nezindlela namasu okubhala phansi nokuqophpha ulimi. Le ntsha ekhuluma isiPhuthi ngokusiqephaza ingase ithathwe njengabaqaphi ababalulekile bolimi namasiko abo okusengozini yokushabalala.

Le nkundla yokucobelelana ngolwazi ayiqeqeshi kuphela mayelana nezindlela zokubhala phansi nokuqophpha ulimi kodwa ifundisa nangokwenza,

## Xhumana nathi:





izinto ngenkambiso efanele mayelana nokubhalwa nokuqoshwa kolimi, ngokusungula *imethadatha*, ngezindlela ezamukelekile zokugcinwa kolwazi kanye nokuthuthukiswa kwamanye amakhono abalulekile. Ababekhona baqala ukusebenzisa amakhono abo amasha ngokurekhoda umcimbi wonyaka obaluleke kakhulu ekhalendeni yabaPhuthi: isikhumbuzo sokukhothama kwenkosi yabo u-Murena Moorosi. Lo mcimbi abaPhuthi bawubiza ngokuthi yiSikhumbuzo sika Murena Moorosi.

Lokhu kuqequesha kwakubanjelwe *e-Bethel Business and Community Development Centre* (BBCDC), okuyisikhungo sokuqeleshelwa imisebenzi yezandla okuyindawo ekwenye yezingxenye ezazincishwe amathuba kakhulu ngaphambilini ezweni laseLesotho.

## Ukusebenza ngesikhathi se-COVID-19

Iqembu lahlangabezana nenselele enku lu yokuqhube ka nokwenza umsebenzi walo wolimi ngesikhathi umhlaba wonke ubhekene nobhubhane lwe-COVID-19. Noma kunjalo, lalikuqikelela kakhulu ukulandela imigomo yendawo ebekiwe, naleyo ebekwe kuzwelonke nakumazwe ngamazwe. Abacwaningi bebehlolelwa igciwane ngokusetshenziswa kwe-PCR ngaphambi kokungena e-Lesotho bese kuthi bonke ababambiqhaza ebebethamela izinkundla zokucobelelana ngolwazi bebehlolwa ngokusetshenziswa kwama-*rapid lateral flow test* ngaphambi kokuba kuqalwa imimisebenzi yosuku. Bekuthathwa izilinganiso zamazinga okushisa komzimba nsuku zonke bese zibhalwa phansi, futhi bekugcinwa nomgomo wokuqhelelana kwabantu. Lapho kuphumeleleka khona, uma kukhona okudingeka kwensiwe, kwkwenzelwa ngaphandle.

### Xhumana nathi:





# IPHROJEKTHI YENTANDO YENINGI ESUKA EMAZINGENI APHANSI

- ngu-Boitumelo Matlala

*Temokerasi ke kgololosego, mme mo aforika borwa ga eyo kgololosego. Ga gona le temokerasi, ke maaka hela (Intando yeningi yinkululeko, kodwa lapha eningizimu afrika ayikho inkululeko. Nentando yeningi ayikho, ngamanga kuperha (Umbambiqhaza 60, Inhlolovo Yentando Yeningi Esuka Emazingeni Aphansi ka-2021)*

*Go gololosega mo matshelong a rona (Inkululeko ezimpilweni zethu) (Umbambiqhaza 4, Inhlolovo Yentando Yeningi Esuka Emazingeni Aphansi ka-2021)*

Lawa mazwi acashuniwe angenhla ayizimpendulo zemibuzo ethi, 'yiliphi igama noma ibinzana lamagama ongalisebenzisa ukuchaza intando yeningi' kanti 'isho ukuthini intando yeningi kuwe'. Le yimbuzo emibili eyisisekelo kule phrokethi Yentando Yeningi Esuka Emazingeni Aphansi. Izinhloso zethu ngale phrokethi wukwakha indikimba yowlazi mayelana nokwakheka kwemiqondo kanye nokuzwakaliswa kwezwi ngentando yeningi ngezilimi ezisemthethweni zaseNingizimu Afrika, kanye nokuhlaziwa kwentando yeningi eNingizimu Afrika ngokubheka umlando waleli lizwe kanye nokusebenza kwentando yeningi empilweni yabantu yansuku zonke. Le phrokethi iqhotshwa ngokubambisana phakathi kweSikhungo Soshintsho Lwenhalonhle, Nezocwaningo Ngokwakheka Nenhlonhle eNyuvesi yase-Goli (e-Johannesburg) kanye neSikhungo SaseNingizimu Afrika Sezinsiza Zolimi Ngokwedijithali eNyuvesi yaseNyakatho-Ntshonalanga. Ixhaswe Yisikhungo kuZwelonek Emkhakheni Wezobuntu Nezesayensi Yomphakathi.

Le nhlolovo beyenziwa ngezilimi eziyi-11 ezisemthethweni zaseNingizimu Afrika

kusetshenziswa i-Moya App, okuyi-app yokuthumela imiyalezo esetshenziswa abantu abayizigidi ezine ezweni lonke.

Mayelana nemibuzo yenhlovo, ulimi ngalunye lwaluneqembu labahumushi ababili ababehumushela kolunye ulimi baphinde bahumushele kulolo limi lasekuqaleni ukuze ingqikithi yombuzo ingalahleki. Umsebenzi wethu ekusungulen le nhlolovo kwakuwukuthola ukuthi yimiphi imigomo yentando yeningi okukholelwu ukuthi ibalulekile, ngakolunye uhlangothi senze imibuzo ngenhloso yokuthi sikhazi ukuthola izinga lokujina nobukhulu bezwi lokuzwakalisa okunye okwehlukile mayelana nentando yeningi. Le nhlolovo ibuyise izimpendulo ezingaphezu kwezi-2000.

Inhlolovo ingelinje lamathuluzi amabili amakhulu ocwaningo asetshenziswa yiphrokethi yeNtando Yeningi Esuka Emazingeni Aphansi. Ithuluzi lesibili elisetshenziswayo yizigcawu zemibuzo zocwaningo lwasimo. NgoZibandlela ngo-2022, saqala ukwenza izigcawu zemibuzo ezingahlelekile ngokuphelele. Zisaqhubeke izigcawu zemibuzo ezenziwa yithimba labacwaningi abathathu.

## Xhumana nathi:





## Xhumana nathi:



Okwamanje, sesibe nezicawu zemibuzo nezishoshovu zendawo e-Limpopo, eNyakatho Ntshonalanga, eMpumalanga Kapa, KwaZulu-Natali, e-Free State nase-Gauteng. Ngokwenza ukuthi imibuzo yenhololo ijule, izigcawu zemibuzo yocwaningo lwasimo zikwazi ukuveza ingqikithi nomlando okubangela ukudaleka kwemiqondo ethile kubantu kanye nendlela yokuzwakaliswa kwezwi mayelana nentando yeningi. Lezi zinhlolovo siziqhuba ngezilimi zendawo bese sizibhala ngazo lezo zilimi. Imibhalo yokuqoshiwe sibe sesiyithumela kubahleli ukuze baqinisekise ukuthi kubhalwe kahle konke lokho obekukhulunywa bese kuthi emva kwalokho kuhunyushelwe esiNgisini. Enye yeziniloslo zale phrojekthi ukwakha iqoqo ledatha yezezilimi. Okwamanje, awakatholakali amasethi edatha ngazo zonke izilimi zomdabu futhi awekho anesihloko esifanayo ngezilimi eziningi.

Okunye ngale phrojekthi Yentando Yeningi kubandakanya ukubanjwa kwesemisa nokuqoshwa kwefilimu emfushane. Isemina izohlanganisa amalungu ahlukene ethimba labacwaningi, kanye nezinye izazi ezisebenza kulo mkhakha, ukuze kuxoxwe futhi kudingidwe ngemiphumela yokuqala yocwaningo. Ifilimu emfushane izoqoshwa ngoMbsa ka-2022 e-Duncan Village, eMpumalanga Kapa. Ifilimu emfishane izokhombisa izishoshovu esisebenze nazo, futhi izoveza ukwehlukana phakathi kwencazelo nomzabalazo wenkululeko kanye nesilinganiso sentando yeningi evikela inkululeko yomuntu ngamunye nevikela impahla. Inhoso yokuthi iqoshelwe e-Duncan Village, wukuthi sifisa ukuqonda indlela le mibono esekelwe ngayo emlandweni nasemizabalazweni yendawo. Inhoso yaleli filimu ukusiza ekusabalalisweni kwezingxoxo ezimayelana nencazelo yentando yeningi, ukusebenza kwayo kanye nengqikithi yayo bese sicabangisia ngokuzibophezela kwethu ekukhiqizeni ulwazi oluzimele okuhloswe ukuba kwabelwane ngalo ngenhoso

yokwenziwa kocwaningo oluphathelene nezesayensi yezenhlalonhle ngokusebenzisa izindlela ezingajwayelekile.

Ingqikithi evamile yowlazi olukhona emiphakathini ngemuva kokuthi izwe lithole ukuzimela noma inkululeko okumayelana nokwakhiwa kwemiqondo ngentando yeningi, nangokusebenza kwayo kanye nokuzabalazelwa kwayo luvame ukuthi lungathathwa njengoluwumgomgo wentando yeningi. Yingakho-ke le phrojekthi Yentando Yeningi kuhloswe ngayo ukuthuthukiswa kwemfundiso egcizelela ukuthi lolu lwazi, umlando kanye nalokho abantu baseNingizimu Afrika abahlangabezana nakho kube yingxenye yemigomo yentando yeningi ngenhloslo yokwakha umqondo wentando yeningi ukusuka kubantu abasemazingeni aphansi emiphakathini. Siyaqonda ukuthi intando yeningi kanye nezinkundla zentando yeningi kuyizizinda zenkulumo mpikiswano ebandakanya imiqondo eqavile nevamile yeningi labantu mayelana nentando yeningi - njengamalungelo abantu kanye nenkululeko yezombusazwe - nakuba kunjalo le miqondo ingachazwa ngendlela entsha uma ihlaziya ngendlela yokuthi ihlaziwe ukusuka ngasohlangothini lwabantu abasemazingeni aphansi.



# ITHIMBA LE-SADILAR LIFUNDISA I-DATA CARPENTRIES E-WITS

- ngu-Natalie Simon

Le ntuthuko enkulu kwezobuchwepheshe bedijithali esibe khona kusukela eminyakeni embalwa edlule isho ukuthi abacwaningi abakuyo yonke imikhakha sebengakwazi manje ukuqoqa idatha ngezinga elingakaze licatshangwe ngaphambili. Nakuba kunjalo kusenokusilela kwamakhono ekulawulweni nasekuhlaziyweni kwaledatha, hhayi eNingizimu Afrika kuphela, kodwa emhlabeni wonke jikelele.

I-Data Carpentry iwuhrlelo lomhlaba wonke, olwakhwi lwaphinde lwasimamiswa yimiphakathi yendawo enentshisekelo, lapho le miphakathi ihlinzeka ngezinkundla zokucobelelana ngolwazi mayelana nokuthuthukiswa kwamakhono ayisisekelo adingekayo edatha ukuze kwenziwe ucwaningo. Inhloso ye-Data Carpentries ' wukufundisa abacwaningi imiqondo eyisisekelo, namakhono kanye namathuluzi okusebenza ngedatha ukuze bakwazi ukwenza umsebenzi omningi ngesikhathi esifushane nangaphandle kokuhlangabezana nezinselele ezinkulu.'

NgoNhlanja ka-2022, amalungu amathathu eSikhungo SaseNingizimu Afrika Sezinsiza Zolimi Lwedijithali (i-SADIaR), u-Mmasibidi Setaka, no-Benito Trolip kanye no-Juan Steyn, babamba inkundla yokucobelelana ngolwazi ye-Data Carpentry eyayiseNyuvesi yase-Witwatersrand (e-Wits) eyayihanjelwe kakhulu ngabafundi abenza iziqu ze-Master of Arts (MA) ne-National e-Science Postgraduate Teaching and Training Platform (NEPTTP). Lolu hlelo luyingxene yohlelo lukazwelone lokwakha amakhono ezesayensi yedatha kubafundi baseNingizimu Afrika asebephethule iziqu zokuqala. Luuhlelo lwezikhungo eziningi olugquqquzelwa yinhangano yamanyuvesi ayisithupha aseNingizimu Afrika: okuyiNyuvesi yaseNyakatho-Ntshonalanga, neNyuvesi yase-Sol Plaatje, neNyuvesi yaseLimpopo, neNyuvesi yasePitoli, neNyuvesi yase-Venda, kanye neyase-Wits.

Nakuba i-NEPTTP ihlinzeka ngemikhakha emibili: Okuyi-Master of Science kanye ne-MA, le nkundla yokucobelelana ngolwazi beyiqondene ngqo nabafundi abenza iziqu ze-MA. Abafundi abaphakathi kwabayi-10 ne-13 bebebambe iqhaza kule nkundla yokucobelelana ngolwazi ethathe izinsuku ezintathu ebidingida ngesingeniso esimayelana nemiqondo eyisisekelo kwezesayensi yedatha. Abafundi bebephuma emikhakheni eyahlukahlukene, kubandakanya umkhakha wezobudlelwane bamazwe ngamazwe, umkhakha wezengqondo, umkhakha wezemithombo yabezindaba kanye nomkhakha wezentuthuko.

'I-Carpentries iwuhrlelo oluhle kakhulu lokuqequesha kwezesayensi yedatha,' kusho u-Trolip, ongomunye wabafundisi be-SADIaR kule nkundla yokucobelelana ngolwazi, 'ngoba uhlelo lwezfundo (i-curriculum), izinsizakusebenza, nayo yonke imibhalo itholakala kalula ngelayisensi ye-Creative Commons.'

'Lokhu kusho ukuthi abafundisi bangathembela kulolu hlelo lwezfundo olusimeme, futhi uma abafundi befisa ukubukeza ngemuva kwale nkundla yokucobelelana ngolwazi, noma uma kwenzeka ukuthi iqembu alikwazanga ukupethula lolu hlelo lwezfundo ngokuphelele kulezi zinsuku ezintathu, abafundi bangakwazi ukuthola abaphuthelwe yikho ku-inthanethi.'

## Xhumana nathi:





Kule nkundla yokucobelelana ngolwazi abafundi bafundiswe ngendlela eyisisekelo yokulawula idatha ngendlela efanele, kubandakanya nokubhekana nezinselele ezifana nenkinga yokusebenzisa i-software yobunikazi (njenge-Microsoft Excel) ngenhloso yokusebenzisana noma yokwabelana ngokuvulelekile ngedatha, nanokuthi yiziphi ezinye izindlela ezikhona.

Ababambiqhaza baphinde bafundiswa ngokuhlela ulimilwe-R, oluvame ukusetshenziswa kuzo zombili izinhlobo zocwaningo, okuwucwaningo olumayelana namanani kanye nalolo olumayelana nesimo emkhakheni wezesintu nezesayensi yomphakathi.

'Phezu kokufundisa izifundo ze-Carpentries ze-R, siphinde sethula no-R ngephakheji ethize ka-R eyaziwa ngokuthi yi-Swirl,' kuchaza u-Trollip. 'Kuyithuluzi elisebenziseka kahle kakhulu elisiza umuntu ukuthi afunde u-R ngendlela yokulandela isinyathelo ngasinye.'

Abafundi baphinde bafundiswa nge-OpenRefine, "okuyithuluzi elinamandla lokusebenza ngedatha eyinhlikinhlikli" okungenye indlela enhle kakhulu engasetshenziswa esikhundleni samaspredishidi e-Excel yingakho ikwazi ukuhlinzeka ngezinye izinhlelo, lapho ukwazi khona ukushintsha idatha uphinde uyihlele, futhi akukho okulahlekayo. Ngakho kulula ukulandelela umsebenzi nokubuyela emuva ngezinyathelo ezimbalwa uma wenze iphutha.

Uhlelo lwe-NEPTTP ngolwayo yonke imikhakha, okusho ukuthi abafundi bafundiswa ezesayensi yedatha kanti enye ingxene yalolu hlelo iqondene nokuthi basebenzise amakhono abo ezesayensi yedatha kanye nolwazi emikhakheni yabo njengengxene yombiko wabo wokugcina wocwaningo.

Abaqeqeshi be-SADiLaR Data Carpentry baneliseka kakhulu ekusizeni abafundi ukuthi bakwazi ukusebenzisa u-R kumaphrojekthi wocwaningo okungawabo.

'Ngikhumbula ngalokho engahlangabezana nakho ngesikhathi ngenza iziqu zami zesibili, ngiyazi kahle inselele yokuba nombono omuhle wocwaningo ofuna ukulwenza kodwa ube ungazi ukuthi ulwenze kanjani,' kusho u-Trollip. 'Okube mnandi kakhulu kimi ngale nkundla yokucobelelana ngolwazi bekuwukukhulumma nabafundi ngamaphrojekthi abo ocwaningo nokusebenzisana nabo ngezinyathelo okumele bazithathe ukuze bafike lapho baphokophele khona.'

Kulabo bafundi ebebebamble iqhaza kule nkundla yokucobelelana ngolwazi ye-Data Carpentry nabafuna ukwandisa ulwazi lwabo, i-SADiLaR ihlinzeka ngohlelo olubizwa i-ESCALATOR, olwenzelwe ukusiza ekwakheni nasekusekeleni intshisekelo yabacwaningi mayelana nokusebenzisa amathuluzi edijithali kanye nezindlela zokwenza ucwaningo lwabo kanye nokufundisa.

## Xhumana nathi:





## IMICIMBI EZAYO

I-SADiLaR ihlela imicimbi emithathu emikhulu yesifunda ezoba phakathi kukaMandulo noLwezi ka-2022 eNingizimu Afrika yonkana. Lokhu kuyingxenyen yeprojekthi ye-ESCALATOR futhi ihlose ukuqhubeke nokukhuthaza umphakathi osemkhakheni wezobuntu ekusebenziseni ezobudijithali nasekusebenziseni amakhono ezekhompyutha kwezesayensi yomphakathi. Le micimbi izokwethulwa ngendlela yezingxoxo ezhilelekile nezingahlelekanga okuhloswe ngazo ukucobelelana ngemibono, qinisekisa ukuthi ubeka iso kuwebhusayithi yethu kanye nasenkundleni yethu yezokuxhumana ukuze uthole izimemo zokubamba iqhaza.

Ukuze uthole olunye ulwazi nge-ESCALATOR, sicela uvakashele iwebhusayithi noma ubhalisele ukuba sohlwini lwabathunyelelwa ama-imeyili ezimemezelo ze-ESCALATOR.

## Cofoza lapha ukuze ube yilungu lenyuziletha yethu



### Xhumana nathi:

