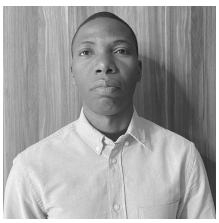
FELERMINO ALI

A Software Engineer & AI enthusiast willing to work on real-problem for African communities

felerminoali@gmail.com | +258 846-689-637 / +351 910-51-7193 | Marracuene
Maputo, Mozambique | felerminoali.github.io/ | @felerminoali | felermino-ali
felerminoali



EXPERIENCE

Researcher

Laboratory of Artificial Intelligence and Computer Science (LIACC) - Faculty of Engineering of Porto University

Sept 2021 - Present | Porto, Portugal

- Researcher and PhD student: Natural Language Processing and Machine Translation Research

Consultant - Software Engineer

Cedsif, IT

Jul 2021 | Maputo, Mozambique

- Center for the Development of Finance Information Systems (CEDSIF) - CEDSIF is an institution linked to the Ministry of Economy and Finance which was set up to modernize the public finance management information systems for all state and municipal bodies
- Full stack developer for Government Municipality Management System.

Administration | Faculty Member | AI Researcher and Software Developer

Lurio University

Pemba, Mozambique

- Assistant Lecturer of the following subjects: Object Oriented Programming, Database Lab
- Developer of E-Sira (seul.unilurio.ac.mz)
- Deputy Director of Faculty of Engineering
- Research

Research Assistant

Research Assistant

SEGi, Malaysia

- Assistant Lecturer of the following subjects: Object Oriented Programming, Database Lab
- Developer of E-Sira (seul.unilurio.ac.mz)
- Research

PROJECTS

Emakhuwa Machine Translation Dataset Collection

Lacuna Fund/Meridian Institute

2 yrs

- Awarded a grant to create the first large-scale dataset for Machine Translation of the Emakhuwa language, Mozambique's widely spoken indigenous language.

HONOR AWARDS

Valedictorian
Given at graduation ceremony by the former President of Mozambique (His Excellency Mr Armando Emilio Guebuza)

FCT PhD scholarships
shortlisted as first place at "Consórcio de escolas de engenharias" of Science and Technology Foundation - PhD scholarships

SKILLS

Hard-working | Eye for detail | Motivator & Leader

C++ | Python | R | NLP | Data Science | Artificial Intelligence | Statistical Analysis | Agile Management | Software Engineering | JAVA | Web Development

LANGUAGES

Portuguese ●●●●●

English ●●●●◐

Emakhuwa ●●○○○

EDUCATION

Ph.D. in Informatics Engineering

Faculty of Engineering of the University of Porto

Sept 2021 – ongoing | Porto, Portugal

Thesis title: Machine Translation for Emakhuwa, an Extremely Low-resource Bantu Language

M.Sc. in Information Technology

SEGi University

- https://lacunafund.org/2021-african-language-awardees/

Google exploreCSR

Google

1 yr

Developed a proposal to promote computing research among underprivileged students in the North of Mozambique. The project focused on boosting self-efficacy, fostering belonging, providing practical skills in Computer Sciences, and encouraging graduate studies.
https://research.google/outreach/explore-csr/recipients/

PUBLICATIONS

Conference Proceedings

- F. D. M. A. Ali, G. de Jesus, H. L. Cardoso, S. Nunes, and R. Sousa-Silva, "Network-based approach for stopwords detection," in *Proceedings of the 16th International Conference on Computational Processing of Portuguese - Vol. 2*, P. Gamallo, D. Claro, A. Teixeira, *et al.*, Eds., Santiago de Compostela, Galicia/Spain: Association for Computational Lingustics, Mar. 2024, pp. 55–63. [Online]. Available: https://aclanthology.org/2024.propor-2.9.
- F. D. M. Ali, H. Lopes Cardoso, and R. Sousa-Silva, "Building resources for emakhuwa: Machine translation and news classification benchmarks," in *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing*, November: Association for Computational Linguistics, Nov. 2024.
- F. D. M. Ali, H. Lopes Cardoso, and R. Sousa-Silva, "Detecting loanwords in emakhuwa: An extremely low-resource Bantu language exhibiting significant borrowing from Portuguese," in *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*, N. Calzolari, M.-Y. Kan, V. Hoste, A. Lenci, S. Sakti, and N. Xue, Eds., Torino, Italia: ELRA and ICCL, May 2024, pp. 4750–4759. [Online]. Available: https://aclanthology.org/2024.lrec-main.425.
- F. M. E. Manuel, S. M. Saide, F. D. M. A. Ali, and S. Lotfi, "Ocular cataract identification using deep convolutional neural networks," in *2023 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD)*, 2023, pp. 1–5. DOI: 10.1109/icABCD59051.2023.10220532.
- S. Muhammad, I. Abdulmumin, A. Ayele, *et al.*, "AfriSenti: A Twitter sentiment analysis benchmark for African languages," in *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, H. Bouamor, J. Pino, and K. Bali, Eds., Singapore: Association for Computational Linguistics, Dec. 2023, pp. 13 968–13 981. DOI: 10.18653/v1/2023.emnlp-main.862.
- E. Á. Cardoso, F. D. M. A. Ali, and S. M. Saide, "Snake species identification using deep convolutional neural networks," in *2022 IEEE 13th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)*, 2022, pp. 0202–0209. DOI: 10.1109/IEMCON56893.2022.9946504.

Sept 2014 – June 201 Malasya, Kuala Lumpur

PUBLICATIONS

Journal Articles

- F. D. M. A. Ali, H. L. Cardoso, and R. Sousa-Silva, "Expanding flores+ benchmark for more low-resource settings: Portuguese-emakhuwa machine translation evaluation," 2024. arXiv: 2408.11457 [cs.CL]. [Online]. Available: https://arxiv.org/abs/2408.11457.
- S. M. Saide, E. L. A. Sarmento, and F. M. D. A. Ali, "Cryptojacking malware detection in docker images using supervised machine learning," *International Conference on Intelligent and Innovative Computing Applications*, 2022. [Online]. Available: https://api.semanticscholar.org/CorpusID:257780017.
- F. D. M. A. Ali, A. Caines, and J. L. A. Malavi, "Towards a parallel corpus of portuguese and the bantu language emakhuwa of mozambique," 2021. arXiv: 2104.05753 [cs.CL].
- F. D. M. A. Ali, E. Gimo, and S. M. Saide, "A minimax agent for playing ntxuva game – the mozambican variant of mancala," pp. 1–5, 2020. DOI: 10.1109/icABCD49160.2020.9183848.
- B. J. Fonseca, A. Felermino D. M. A., and S. M. Saide, "A deep convolutional neural network for classifying waste containers as full or not full," pp. 54–59, 2019. DOI: 10.1109/ISC246665.2019.9071746.