

# Artificial Intelligence & Machine Learning

November 17-18, 2025 | London, UK



**Osondu Oguike and Mpho Primus**

Institute for Intelligent Systems, University of Johannesburg, South Africa.

## A Dataset for Multimodal Music Information Retrieval of Sotho-Tswana Musical Videos

Sotho-Tswana languages are languages spoken by the Sotho-Tswana people in Southern Africa. They have been used to compose diverse musical videos on different social media platforms. Music Information Retrieval, MIR is a research area that combines Artificial Intelligence, like Natural Language Processing and Machine Learning to retrieve music information. It consists of the following tasks: music emotion/sentiment recognition, identification of singing language in music, music genre classification, etc. It bridges the gap between speakers of Sotho-Tswana languages and non-speakers of Sotho-Tswana languages in music information understanding. Since music communicates through different modalities, like lyrics, audio, and visual, music information retrieval tasks have been extended to include multimodal music information retrieval. Multimodal music information retrieval can only be possible with the availability of a multimodal music dataset. This effort creates a multimodal dataset for music information retrieval of Sotho-Tswana musical videos. The multimodal dataset combines three modalities, lyrics, audio, and visual modalities, with a recommended feature level/late fusion technique, which will be used to combine the results of model training of each of the various modalities.

### Biography

Associate Professor Osondu Everestus OGUIKE is a native of Orji in Owerri North Local Government Area of Imo State, Nigeria. He attended the following schools, Orji Town Primary School, Orji Uratta, Owerri; Holy Ghost College, Owerri; University of Lagos, Lagos, Nigeria; Queen Mary and Westfield College, University of London and University of Nigeria, Nsukka. He obtained the following certificates, degrees and diploma, First School Leaving Certificate (1980), WAEC/GCE O' Level (1985), B.Sc (Hons.) Mathematics and Statistics (1990), PGD Information Technology and M.Sc Information Technology (1991) and Ph.D (Mathematical Modelling/Computational Mathematics) in January 2018. While in school, and at work place, he received the following academic awards/prizes, University of Lagos scholarship for the best students in 1987/88, best graduating student, Department of Mathematics, University of Lagos, Nigeria in 1988/89, ODA Shared Scholarship Scheme, Queen Mary and Westfield College, University of London in 1990/91, Intra-Africa Academic Mobility Scholarship, University of Yaounde, Cameroon, March 2022, Post-Doctoral Research Fellowship, University of Johannesburg, South Africa, 2023/2024. Though he has worked in the industry in Nigeria as Computer Programmer, he started his academic career at the University of Nigeria, Nsukka as Lecturer II, in 1999. He has continued there, till date as an Associate Professor in Computer Science. His research outputs have been published in impact factor, international journals and conference proceedings. He has served and currently serving as editorial board member in many international journals. He has served and currently serving as technical committee member in many international conferences, in different parts of the world. He has authored many books and book chapters. He has served as Head of Computer Science Department at Veritas University Abuja, and is currently the Head of Department of Department of Computer Science, University of Nigeria, Nsukka. He was part of the team that developed different course materials for the M.Sc (Artificial Intelligence), African Center of Excellence on Technology Enhanced Learning (ACETEL), National Open University of Nigeria.