JAMIU TUNDE SULEIMAN

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EDUCATION

MSC Kyungpook National University, Daegu, South Korea, Electronics and Electrical Engineering   2023 - 2025

BEng Bayero University, Kano, Nigeria, Computer Engineering   2013 - 2018

RESEARCH EXPERIENCE

Graduate Researcher
Kyungpook National University, Daegu, South Korea   Mar 2023 – Present

- Studied data augmentation techniques to improve artifact character recognition by more than 10% compared to the baseline.

- Investigating the use of rationales generated by large reasoning models to evaluate passage relevance in Retrieval-Augmented Generation (RAG) systems.

Researcher
Machine Learning Collective (MLC)   Feb 2023 – Present

- Worked on the development of a de-identification pipeline for personal information in documents.

- Investigated the impact of data augmentation methods (e.g., back-translation, paraphrasing, storytelling) on low-resource African languages, which improved the BLEU score of the translated languages by 25%.

- Led the creation and management of research subgroups at the MLC-Nigeria Chapter

- Evaluated the reasoning abilities of MLLMs using Rebus puzzles, revealing that the performance of multimodal language models on difficult puzzles is under 20%.

PUBLICATIONS

- Revisiting and Revising RVL-CDIP: Quantifying Errors and Test-Train Overlap(Under Review EACL 2025)
- Understanding LLM Reasoning (Under Review)

- Investigating the Effects of Data Augmentation Techniques on African Machine Translation (Arxiv)
- De-Identification of Sensitive Personal Data in Datasets Derived from IIT-CDIP (EMNLP 2024)
- Advancing Ancient Artifact Character Image Augmentation through Styleformer-ART for Sustainable Knowledge Preservation (*MDPI sustainability*)

PROFESSIONAL EXPERIENCE

Software Engineer
MyClinify, Nigeria   Mar 2021 – Oct 2021

- Developed the Clinify admin dashboard using React.js, integrating it with a GraphQL API.
- Designed and implemented backend functionalities using Next.js, GraphQL, and PostgreSQL, improving the admin workflow.

Software Developer
Build4Sdg Cohort 2, Nigeria   2020 – 2020
- Worked in a team to develop key pages for a web application using React.js.
- Integrated frontend components with the Django backend API, improving user experience and application functionality.

Network Administrator & IT Officer
National Youth Service Corps (NYSC), Nigeria
2018 – 2019
- Manage IT resources and Networks at the minister for FCTA Administrative building

PRESENTATION AND LECTURES

Paper Presentation

- Generative Adversarial Network Models for Augmenting Digit and Character Datasets Embedded in Standard Markings on Ship Bodies.
  - *Proceedings of the International conference on big data, IoT and Cloud computing in Jeju, South Korea, Aug. 16-18, 2023.*

TEACHING EXPERIENCE

St Claire's girl's grammar school, Offa, Nigeria   2021 – 2022

- Instructing, teaching, and guiding students through the computer science and mathematics syllabus, improving their performance in these subjects from an average pass rate of 35% to 65%.

- Design and delivery of curriculum, ensuring alignment with Nigeria School standards and the School's objectives.

- Engage and inspire students through comprehensive one-on-one and group discussions.

SELECTED INDEPENDENT COURSEWORK

- Coursera- Supervised Machine Learning: Regression and Classification
- Coursera- Natural Language Processing with Probabilistic Models
- Coursera- Algorithm Toolbox

TECHNICAL COMPETENCIES

Machine Learning: Pytorch, HF, NLTK, Cv2, Numpy

Software Engineering: Python, C++, Javascript, SQL, Node.js, React JS, HTML, Unix, Git, AWS, GCP