

Sewade Olaolu Ogun

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Experience

Research Experience

10.21–10.24 **Researcher PhD. Student, INRIA**

National Institute for Research in Digital Science and Technology (INRIA, Nancy)

💡 Thesis: Improving the naturalness and diversity of utterances generated by Text-to-speech (TTS) models for ASR data augmentation.

💡 Thesis supervisors: Emmanuel Vincent (INRIA) and Vincent Colotte (LORIA)

10.20–10.21 **Research and Teaching Assistant, AIMS/AMMI**

African Institute for Mathematical Sciences, Senegal

💡 Worked on weakly-supervised and self-supervised learning of speech representations for African (Kinyarwanda and Kabyle) Languages.

03.21–08.21 **Machine Learning Research Engineer, Remote**

Ubenwa - Quebec, Canada

💡 Developed a Cry Activity Detection library for segmenting cry signals in audio among more than 79 different non-cry sounds

02.20–11.20 **NLP Engineer, Remote**

Proto - Vancouver, Canada

💡 Built a conversational AI tool to automate Covid-19 education and counter disinformation in Nigeria

💡 Worked on text labelling for African languages

Teaching Experience

01.23–06.23 **Teaching Assistant, Speech Corpus, NLP Masters, University of Lorraine**

INRIA, Nancy

12.20–10.21 **Teaching Assistant, Machine Learning, African Masters in Machine Intelligence**

African Institute for Mathematical Sciences, Senegal

06.21–12.21 **Volunteer Instructor, Python Programming**

TReND in Africa



Education

2021–2024 **Doctor of Philosophy, Computer Science, Current**

University of Lorraine, Nancy -

2019–2020 **MSc. Mathematical Sciences, Machine Intelligence**

African Institute for Mathematical Sciences (AIMS), Ghana - *Distinction*

2018–2019 **MSc. Electrical and Electronic Engineering**

University of Lagos (UNILAG), Nigeria - *Distinction*

2007–2012 **B.Tech (Hons) Electronic and Electrical Engineering**






Ladoke Akintola University of Technology (LAUTECH), Nigeria - *First Class*



Published Papers

- 1 Ogun, Sewade et al. "Can we use Common Voice to train a Multi-Speaker TTS system?." 2022 IEEE Spoken Language Technology Workshop (SLT). IEEE, 2023.
- 2 Ogun, Sewade et al. "Stochastic Pitch Prediction Improves the Diversity and Naturalness of Speech in Glow-TTS." Interspeech 2023 (2023).

Articles/Talks

- MSc Thesis **Towards a Weakly-Supervised Learning Paradigm for Speech Recognition.** 
Supervisor: Moustapha Cisse (Previously at Google AI) and Yossi Adi (Meta AI / Hebrew University)
- Articles **How to create a speech dataset for ASR, TTS, and other speech tasks** 
From GRU to Transformer 
Other interesting articles on [my homepage](#) 
- Talk **Adversarial Examples: Showing how deep learning models can be fooled by adversarial attacks** 

Projects

Statistical testing of ASR models,

Python code to perform statistical testing of ASR models using the bootstrap method.

Iterative vocoding,

Python code to convert spectrograms to audio using popular audio phase retrieval algorithms

Cry Activity Detection

Cry Activity Detector (similar to a Voice activity detector) that distinguishes cry from other activity in audio




Yoruba Speech Dataset: A dataset for low-resource speech tasks,

Over 3 hours of clean audio recordings of yoruba text. Used for low-resource automatic speech recognition or text-to-speech

Technical Skills

- 1 Programming Languages: python, javascript, SQL
- 2 Deep Learning Frameworks: pyTorch, pytorch-lightning, tensorflow, huggingFace
- 3 Research: distributed computing, speech and language processing, Git, \LaTeX
- 4 Languages: English & Yoruba (Native), Pidgin (Bi-lingual), French (Upper Intermediate), Spanish (Beginner)

Additional Courses and Certifications

- 2020 **Data Engineering with Google Cloud,** *Coursera/Google,* 
Designed solutions involving Extract, Transform and Load (ETL) operations of batch/streaming data using Cloud Dataproc, Cloud Dataflow and Bigquery; analyzed big data using Google Data Studio and Bigquery
- 2019 **Deep Learning Specialization,** *deeplearning.ai,* 
Implemented deep learning models and algorithms such as batch normalization, convolution, optimization algorithms(RMSprop, Adam), YOLO, LSTM enabling a concrete understanding of the subject.
- 2019 **IBM Data Science Professional Certificate,** *Coursera/IBM,* 
Instance segmentation, pose estimation, object tracking performed on datasets using the detectron2 library. Pretrained models finetuned on custom tasks - [Project Link](#)
- 2014 **Oracle Database SQL Administration,** Oracle University
SQL Administration, Database management

Workshops/Summer Schools

- 2023 Rencontres des Jeunes Chercheurs en Parole 2023 - Grenoble, France
- 2022 The International School on Deep Learning, DeepLearn - Guimarães, Portugal
- 2020 Machine Learning Summer School, Max Planck Institute of Intelligent Systems, Germany - Virtual
- 2019 Deep Learning IndabaX, Lagos

Awards/Scholarships

- 2019 Masters Scholarship for AIMS/AMMI masters by Facebook and Google - Masters

- 2012 Best Graduating Student, Electrical Communications - Undergraduate
- 2009 - 2011 MTN Foundation Science and Technology Scholarship - Undergraduate
- 2006 1st Place, Lagos State Mathematics Olympiad - High school
- 2004 Bronze Medal, National Junior Science Olympiad - High school



AI Communities

BioRAMP Community (formerly African Clinical Speech Research Group)
Masakhane NLP Research Group
Black-In-AI