

Sewade Ogun

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Summary

Ph.D from INRIA, France. I am broadly interested in applied AI research in natural language processing including large language models for text and speech.

Work Experience

INRIA

Nancy, France

PH.D STUDENT

Oct. 2021 - Sept. 2024

- Developed generative-model-based models for text-to-speech (TTS) and voice conversion (VC) to increase the diversity of generated utterances.
- Developed ASR systems to combine real data and synthetic data for ASR training considering the distributional gap between real and synthetic data.
- Worked on the vocal assistant project within INRIA to integrate TTS, LLMs, and ASR within the application.

African Institute for Mathematical Sciences

Mbour, Senegal

RESEARCH AND TEACHING ASSISTANT

Oct. 2020 - Oct. 2021

- Developed ASR models for learning speech representations for African languages in the weakly-supervised setting,

Ubenwa

Canada (Remote)

MACHINE LEARNING RESEARCH ENGINEER

Mar. 2021 - August. 2021

- Developed and deployed an accurate baby cry activity detection (CAD) model for detecting and segmenting infant cry signals in audio.
- Developed AI model for detecting asphyxia from infant cry.

Proto

Canada (Remote)

NLP ENGINEER

Feb. 2020 - Nov. 2020

- Built Conversational AI systems (aka chatbots) that were integrated seamlessly with mobile-driven Question and Answering (Q&A) APIs
- Conducted text annotation and translation for Nigerian languages (Yoruba and Nigerian Pidgin).

Flour Mills of Nigeria Plc

Lagos, Nigeria

PREDICTIVE ANALYST

Apr. 2017 - Oct. 2019

- Created visualization and analytics dashboards sourced from the factory production and logistics database to deliver actionable insights for informed decision-making.
- Conducted comprehensive data analysis to identify areas of opportunity and friction within FMN market operations, providing data-driven recommendations for optimizing operations.

Education

University of Lorraine

Nancy, France

PH.D. IN COMPUTER SCIENCE

Oct. 2021 - Oct. 2024

- Thesis: Generating diverse synthetic data for ASR training data augmentation
- Thesis supervisors: Emmanuel Vincent and Vincent Colotte

African Institute for Mathematical Sciences (AIMS)

Ghana

MASTERS IN MATHEMATICAL SCIENCES (MACHINE INTELLIGENCE SPECIALIZATION)

Oct. 2019 - Oct. 2020

- Thesis: Towards a weakly-supervised learning paradigm for speech recognition
- Thesis supervisors: Moustapha Cisse and Yossi Adi
- Relevant Coursework: Foundations of Machine Learning, Mathematics for Machine Learning, Natural Language Processing, Computer Vision, Speech Recognition, and Reinforcement Learning.
- Grade: Distinction

University of Lagos

Lagos, Nigeria

MASTERS IN ELECTRICAL AND ELECTRONIC ENGINEERING

2017 - 2019

- Grade: Distinction

Ladoke Akintola University of Technology

Ogbomoso, Nigeria

BACHELOR OF TECHNOLOGY IN ELECTRONIC AND ELECTRICAL ENGINEERING

2007 - 2012

- Grade: First Class Honours

Technical Skills

- Programming Languages and Libraries: Python, Javascript, NumPy, PyTorch, Tensorflow.
- Data Science: SQL, Databases (PostgreSQL & MySQL), Microsoft Excel & PowerBI.
- Research: Research article writing, documentation, distributed computing, AI model development.
- Spoken Languages: English (Native), French (Fluent), Spanish (Intermediate).

Publications

Published articles

- **S. Ogun**. Generating diverse synthetic data for ASR training data augmentation. PhD thesis, University of Lorraine, 2024. 2024.
- **S. Ogun**, A. Owodunni, T. Olatunji, E. Alese, B. Oladimeji, T. Afonja, K. Olaleye, N. Etori, T. Adewumi. 1000 African Voices: Advancing inclusive multi-speaker multi-accent speech synthesis. In Proc. Interspeech 2024. 2024.
- T. Afonja, T. Olatunji, **S. Ogun**, N. Etori, A. Owodunni, M. Yekini. Performant ASR models for medical entities in accented speech. In Proc. Inter-speech 2024. 2024.
- G. Coiffier, **S. Ogun**, L. Valque, P. Trivedi. Think before loading (State of the art), 2024, 978-2-9591975-0-5
- **S. Ogun**, V. Colotte, and E. Vincent. Stochastic pitch prediction improves the diversity and naturalness of speech in Glow-TTS. In Proc. Inter-speech, 2023, pp. 4878–4882.
- **S. Ogun**, V. Colotte, and E. Vincent. Can we use Common Voice to train a multi-speaker TTS system? In Proc. SLT. IEEE, 2023. pp. 900-905.

Blog articles

ARTICLES AVAILABLE AT [HTTPS://OGUNLAO.GITHUB.IO/ARCHIVE/INDEX.HTML](https://ogunlao.github.io/archive/index.html)

- Making Efficient Neural Networks.
- From GRU to Transformer.
- You Don’t Really Know Softmax.
- Cross Validation and Reproducibility in Neural Network Training.

Certifications

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| 2020 | Data Engineering with Google Cloud , Google |
| 2019 | Deep Learning Specialization , deeplearning.ai |
| 2019 | IBM Data Science Professional Certificate , IBM |
| 2014 | Oracle Database SQL Administration , Oracle University |

Honors & Awards

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|-----------|---|----------------|
| 2019 | Recipient , Scholarship for the African masters in machine intelligence program by Meta and Google | Ghana |
| 2012 | 1st Overall , Best Graduating Student, Communications Option, at undergraduate level | Nigeria |
| 2009-2011 | 2x Recipient , MTN Foundation Science and Technology Scholarship for Bachelors Degree | Nigeria |
| 2006 | 1st Place , Lagos State Mathematics Olympiad | Lagos, Nigeria |
| 2004 | Bronze Medal , National Junior Science Olympiad | Abuja, Nigeria |

AI Research Groups

- Masakhane NLP Research Group: NLP research on low-resource languages
- Biomedical Research in Artificial Intelligence and Machine Perception (Bio-RAMP) Group: NLP and speech research for medical applications.