# Sakayo Toadoum Sari

Multilingual NLP Researcher & PhD Candidate — CRIL, Artois University

## Professional Summary

Multilingual NLP researcher and engineer specializing in low-resource language technologies across machine translation, ASR/TTS, and human-centered evaluation. Experienced in responsible AI, dataset design, and field deployments within humanitarian contexts. Former UNICEF Chad consultant leading national RCCE actor mapping and data collection. Beginning a PhD at CRIL (Université d'Artois) on discourse-level semantics, intertextuality, and causal reasoning. Passionate about transparent, inclusive language technologies for the Global South.

#### Skills

Programming Python, PyTorch, TensorFlow, Keras, scikit-learn, Hugging Face, Gradio, Docker, Git/GitHub

NLP/ML MT (NMT), ASR, TTS, tokenization, data curation, evaluation & human studies, interpretability, causal/discourse analysis

Data Large-scale preprocessing, annotation guidelines, benchmarks, quality assurance, error analysis

Languages Fluent: English, French

Other Teaching/training, technical writing, community engagement (Masakhane, Africa NLP)

#### Experience

Oct 2023 - NLP Engineer, Batazia, Rotterdam, Netherlands (Remote)

Present O Develop models, algorithms, and tools tailored to African languages; integrate into products with strong OA.

O Lead on ethics, data governance, and privacy-compliant pipelines; define reliability and scalability criteria.

Jul 2025 – Dec Consultant — RCCE, UNICEF, N'Djamena, Chad

2025 O Led national mapping of RCCE actors (CBOs, influencers) across multiple regions; facilitated validation workshops.

O Designed mixed-methods instruments (surveys, interviews, FGDs) and produced final report & interactive actor map.

Apr 2025 – Jul Machine Learning Engineer, CDIAL, Lagos, Nigeria (Remote)

2025 O Trained SOTA ASR & TTS models for African languages; coordinated large-scale human evaluations.

Diagnosed data distribution shifts impacting real-world performance; proposed mitigations.

Jun 2023 - Aug Summer Research Intern (NLP), EPFL, Lausanne, Switzerland

 $2023\ \ \odot$  Modeled and predicted online polarization using NLP techniques.

Nov 2022 - Oct Lead Trainer in Data, Tec4Tchad (Simplon/Univ. N'Djamena), N'Djamena, Chad

2023 O Managed and taught Python, Intro ML, and Git/GitHub to 120+ learners; developed hands-on curricula.

Dec 2022 - Mar Junior Consultant (ML), STEM-Away, Santa Clara, USA (Remote)

2023 O Built NLP skill-extraction pipelines from job descriptions to improve recruitment matching.

Jun 2022 - Sep Project Lead Intern (ML), STEM-Away, Santa Clara, USA (Remote)

2022 O Question recommendation/classification for forums using Sentence-BERT and vector search (Pinecone).

Jul 2019 - Jan Web Dev & ML Intern, Limbe City Council, Limbe, Cameroon

2020 O Built DBMS + web interface for civil status documents (birth, death, marriage) management.

# Education

Oct 2025 - Sep PhD in Artificial Intelligence, CRIL Lab, Université d'Artois, Lens, France

2028 Thesis: Intertextuality and Causalities: Towards a Semantic Analysis of Discourses. Supervisors: Pr. Lakhdar Saïs, Pr. Said Jabbour, Dr. Fabien Delorme.

Dec 2021 - Jun African Master's of Machine Intelligence (AMMI), AIMS, Mbour, Senegal

Thesis: Ngambay-French Neural Machine Translation. Funding: Google & Meta. Supervisor: Dr. Angela Fan.

Oct 2018 - Feb Co-operative Master in Industrial Mathematics (Data Science), AIMS, Limbe, Cameroon

2020 Thesis: Hybrid LSTM + AR Models for Birth Prediction. Funding: MasterCard Foundation. Supervisor: Pr. Marcellin Atemkeng.

Dec 2017 - Nov Master in Physics (Electronics, Automation), University of N'Gaoundéré, Cameroon

2019 Thesis: Optimization of Energy Transfer in a Photovoltaic System.

### Publications (selected)

- 2025 Pretraining Strategies using Monolingual and Parallel Data for Low-Resource MT. AfricaNLP. **PDF**
- 2023 Ngambay-French Neural Machine Translation (sba-Fr). NLP4TIA @ RANLP. arXiv
- 2022 Error-Correction DNNs for South African Wildlife-Vehicle Collision Data. MDPI. Link
- 2023 MASAKHANEWS: News Topic Classification for African Languages. AfricaNLP @ ICLR. arXiv
- 2023 AfriMTE & AfriCOMET: Empowering COMET for African Languages. Preprint. arXiv

Scholarships & Awards

AMMI Full scholarship — Google & Meta

AIMS Full scholarship — MasterCard Foundation

Peer-Review Activities

IGI Global Reviewer (2023, 2024): IDs f866d66b-ff53-4087-96f2-dabeb594eb02; 30802a02-82e9-41a0-8a8a-9cdd1b653550

#### References

Dr. Marcellin Centre for Radio Astronomy Techniques & Technologies (RATT), Rhodes University, South Africa. Atemkeng

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