# **SHERIFF ISSAKA**

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## **EDUCATION**

# University of California, Los Angeles

PhD, Computer Science, Artificial Intelligence - Natural Language Processing

May 2029

# University of Wisconsin - Madison

**B.S,** Computer Science | | Cert., African Studies

May 2022

## RESEARCH INTEREST

My research lies at the intersection of advancing AI capabilities and developing innovative approaches for resource-constrained settings. I am particularly focused on developing multilingual large language models that can perform effectively in low-data and limited-infrastructure environments. This work complements my interest in enhancing models' common-sense reasoning abilities for reliable misinformation detection. Drawing inspiration from personal experiences and a drive for impact, I also explore topics across bioinformatics, optimization, architecture, interpretability, efficiency, deployment, and policy in AI systems.

## **SKILL SUMMARY**

**Research**: Pytorch, HuggingFace, Sklearn, TensorFlow, NLTK, Statsmodels, Docker, MLflow, Dask **Tools**: Python, Java, C, R, Stata, JavaScript, TypeScript, ReactJS, React Native, AWS, GCP, Azure

Languages: English, Twi, Hausa, Kusasi, Busanga, French (basic), Arabic (basic)

#### SELECT MEDIA AND AWARDS

1.	UNESCO Global Coalition for Linguistic Diversity Founding Member	June 2025
2.	UCLA Computer Science PhD Fellowship	September 2024
3.	UCLA Graduate Dean's Scholar Award	September 2024
4.	How can we improve collective intelligence in a multilingual context? Translated	May 2023
5.	Towards Africa-Centered AI. UW-Madison International Division	May 2022
6.	<u>UW-Madison exhibit blends art with science</u> . The Cap Times	February 2022
7.	Fueling Discovery Special Section. Wisconsin State Journal	October 2021
8.	Faces of Data Science. Data Science Institute	September 2021
9.	Wisconsin Science and Computing Emerging Research Stars	January 2021
10	African Studies Program's Racial Justice Award	January 2021
11	King Morgridge Scholar	September 2018

## **LEADERSHIP & SERVICE**

- Collaborating with <u>Common Crawl</u> to fix the internet's language bias in African languages
- Working with MLCommons to create and host large open datasets, supporting global AI growth
- Actively mentoring 3 undergraduate students from marginalized communities in AI research

## RESEARCH EXPERIENCE

#### **Graduate Researcher**

Misinformation, AI, and Responsible Society Lab | Advisor: Saadia Gabriel

Sep 2024 - Present

- Leading research initiatives investigating the robustness, fairness, and scalability of large language models
- Developing novel approaches to enhance model performance in multilingual and low-resource settings
- Designing evaluation frameworks to assess model reliability in misinformation detection tasks

## Lead AI Researcher

African Languages Lab

May 2020 - Present

- Pioneering AI/NLP research initiatives for African languages, encompassing architectural design, large-scale data collection, and deployment of innovative NLP solutions
- Leading a diverse team of 13 researchers, engineers, and linguists, establishing efficient workflows, and fostering cross-functional research collaboration

#### **Data Scientist**

Zafar & ICU Data Science Labs | Advisors: Nabeel Zafar & Anoop Mayampurath Feb 2023 - Sep 2024

- Led computational research in clinical informatics, developing ML models for early detection of pancreatic cancer and pediatric clinical deterioration prediction
- Implemented novel NLP techniques to extract and analyze millions of unstructured clinical notes, advancing high-throughput phenotyping methodologies
- Built AI algorithms for automated risk stratification, significantly improving patient outcome predictions

## Machine Learning Researcher

Dairy Brain | Advisor: Michael Ferris

Sep 2020 - Feb 2023

- Implemented classification and regression models to predict feed efficiency in cows, leveraging over 50 parameters and 10,000 genetic and observed data points to improve the baseline model by over 30%
- Employed core ML principles such as cross-validation, cost-complexity pruning, dimensionality reduction, MLP, regularization, optimization, and distributed cloud computing

## **SELECT PUBLICATIONS**

- 1. The African Languages Lab: A Global Low-Resource Language Initiative Collaborative Approach to Advancing NLP for Underrepresented African Languages. Sheriff Issaka, Yinka AJibola, Evans Kofi Agyei, Faith Nchifor, ..., Saadia Gabriel. Preprint, August 2025
- AI Debate Aids Assessment of Controversial Claims. Salman Rahman, Sheriff Issaka, ..., Shi Feng, Nanyun Peng, Yejin Choi, Julian Michael, Liwei Jiang, Saadia Gabriel. <u>Preprint</u>, June 2025
- 3. **Machine Learning to Predict Early Death Despite Pancreaticoduodenectomy.** Kaleem S Ahmed, Clayton T Marcinak, Sheriff M Issaka, ..., Syed Nabeel Zafar. <u>Journal of Surgical Research</u>, May 2025
- 4. X-teaming: Multi-turn jailbreaks and defenses with adaptive multi-agents. Salman Rahman, Liwei Jiang, James Shiffer, Genglin Liu, Sheriff Issaka, ..., Saadia Gabriel. COLM, April 2025
- Machine Learning-Driven Modeling to Predict Postdischarge Venous Thromboembolism After Pancreatectomy for Pancreas Cancer. Kaleem S Ahmed, Sheriff M Issaka, ..., Anoop Mayampurath, Matthew M Churpek, Jomol Mathew, Syed Nabeel Zafar. <u>Annals of Surgical Oncology</u>, February 2025
- 6. The Ghanaian NLP Landscape: A First Look. Sheriff Issaka, ..., Xuefeng Du. Preprint, May 2024