Ifeoma Doris Okoh

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EDUCATION

University of Ibadan

Master of Science in Mathematics

University of Nigeria

Bachelor of Science in Mathematics

Research Experience

Pre-Doctoral AI Research Fellow | Fatima Fellowship

Sept 2024 – June 2025

Oyo, Nigeria

Nsukka, Nigeria

2018 - 2020

2011 - 2015

- Created a parallel resource for multilingual LLM red teaming that enables cross-lingual and cross-cultural analyses with focus on tasks that have harmful societal impacts.
- Finetuned model to abstain even in hard cases of low-resource misinformation.

NLP Researcher | Masakhane

Aug 2023 – Present

- Contributed to the IgboAPI dataset project as part of a team, leading the fine-tuning of machine translation models to improve performance on dialectal variations, resulting in enhanced representation of Igbo dialects in the model as demonstrated in this paper.
- Applied Elastic Weight Consolidation (EWC) to improve NER model generalization across domains in multiple languages, enhancing F1 scores in MRL 2024 Shared Task on Multi-lingual Multi-task Information Retrieval.

Research Intern | Data Science Nigeria

Oct 2020 – Apr 2021

- Led a collaborative project developing a CNN-based gesture analysis system to monitor and analyze student activities in classrooms, providing insights into academic performance and engagement.
- Pioneered a Named Entity Recognition (NER) model for five under-resourced Nigerian languages, covering the research lifecycle from data collection to model development, and co-authored a research paper, achieving a foundational F1 Score of 62.43% as demonstrated in this paper.

Publications

- Ifeoma Okoh*, Chris Chinenye Emezue*, Chinedu Mbonu, Chiamaka Chukwuneke, Daisy Lal, Ignatius Ezeani, Paul Rayson, Ijemma Onwuzulike, et al. The IgboAPI Dataset: Empowering Igbo Language Technologies through Multi-dialectal Enrichment LREC-COLING Conference 2024 [Paper]
- Shivalika Singh, Freddie Vargus, Daniel Dsouza, ..., **Ifeoma Okoh**, ..., Julia Kreutzer, Ahmet Üstün, Marzieh Fadaee, Sara Hooker Aya Dataset: An Open-Access Collection for Multilingual Instruction Tuning *ACL Conference* 2024 [Paper]
- Wuraola Fisayo Oyewusi, Olubayo Adekanmbi, **Ifeoma Okoh**, Vitus Onuigwe, Mary Idera Salami, Opeyemi Osakuade, Sharon Ibejih, Usman Abdullahi Musa Naijaner: Comprehensive named entity recognition for 5 Nigerian languages AfricanNLP workshop at EACL 2021 [Paper]
- Wuraola Fisayo Oyewusi, Olubayo Adekanmbi, Ifeoma Okoh, Mary Idera Salami, Opeyemi Osakuade, Sharon Ibejih, Vitus Onuigwe Artificial intelligence for pharmacovigilance in Nigerian social media text AI for Public Health Workshop at ICLR 2021 [Paper]
- Wuraola Fisayo Oyewusi, Olubayo Adekanmbi, Sharon Ibejih, Opeyemi Osakuade, **Ifeoma Okoh**, Mary Salami AFRIFASHION1600: a contemporary African fashion dataset for computer vision *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition 2021* [Paper]

Presentation

- LREC-COLING Conference 2024, Italy. The IgboAPI Dataset: Empowering Igbo Language Technologies through Multi-dialectal Enrichment Oral Presentation
- Women in Data Science Conference 2019, Ibadan. Invited to speak following success in achieving second runner-up at the 2019 WiDS Hackathon *Panelist*.

Data Scientist | Prunedge

Jan 2022 – Aug 2023

- Developed a real-time sentiment analysis model using Twitter data and NLP techniques (Tweepy, NLTK) to assess product sentiment, providing insights for product adjustments via an interactive dashboard (Flask).
- Utilized GraphQL API for data extraction from GitHub, followed by analysis and cleansing, enabling real-time
 performance tracking of 100+ developers via ELK stack integration, showcasing its utility in software engineering
 research and project management.

Data Scientist | Monetha

Jun 2021 - Nov 2021

- Formulated a seasonal segment model employing the decision tree algorithm to analyze purchasing patterns, facilitating data-driven decision-making for shop owners regarding seasonal product demand.
- Analyzed customer lifetime value, using statistical methods and data analytics to understand and predict long-term customer behavior.

AWARDS AND ACHIEVEMENTS

- Selected among the top 500 in an international pool of 4,000 for the 2023 KaggleX BIPOC Mentorship Program.
- Secured second place at the 2023 Data Search Engine Hackathon hosted by a German company, Innoscripta.
- Achieved second runner-up position among 204 international participants in the 2019 Women in Data Science (WiDS) Hackathon.
- Awarded full sponsorship for travel, accommodations, and conference fees to attend the 2019 ACM COMPASS Conference on Computing and Sustainable Societies in Accra, Ghana.
- Received full sponsorship for travel, accommodations, and conference fees to attend the Web and Internet Economics (WINE) conference in Oxford, UK, 2018.

Teaching and Mentoring

Data Science Mentor | She Code Africa

Jan 2020 – Sep 2022

• Designed and implemented a beginner-friendly data science curriculum for women, mentoring learners through end-to-end project completion and achieving a 70% success rate in skill enhancement within three months.

Python Instructor | Computer Science Academy Africa

Aug 2019 – Sep 2021

• Taught Python programming to university students, creating and delivering curriculum content that fostered computational thinking and coding skills.

Services

Reviewer | AfricaNLP Workshop at ICLR 2024, Deep Learning Indaba 2024.

Language Ambassador and Researcher | Cohere for AI

May 2023 – Present

• Contributed to an open-science NLP research project focused on instruction multilingualism for low-resource languages and co-authored a paper in the process.

Women Techmakers Ambassador | Google's Women Techmakers

Aug 2019 – Nov 2024

• Championing gender diversity in tech through community events, skill-building workshops, and advocacy at various forums.

TECHNICAL SKILLS

Programming Language: Python

Libraries: PyTorch, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn, Pyspark

Frameworks: Flask, FastAPI

Developer Tools: Git/Github, Docker, Airflow, ELK Stack, Google Cloud Platform, VS Code

Others: SQL, HTML/CSS, Latex

LANGUAGE

English: Fluent, Igbo: Fluent