CONTACT Social Science Research Institute Phone: (919)-681-1863 Information 140 Science Drive, 256 Gross Hall

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Box 90989, Durham NC 27708

Web: https://akandelanre.github.io

Research Interests Bayesian modeling, models for editing erroneous data, multiple imputation, missing data, mixture models, and hierarchical modeling.

EDUCATION

Ph.D. in Statistical Science, Duke University

2019

Dissertation: "Bayesian Models for Imputing Missing Data and Editing Erro-

neous Responses in Surveys" Advisor: Jerome P. Reiter

M.S. in Statistical and Economic Modeling, Duke University

2015

Thesis: "A Comparison of Multiple Imputation Methods for Categorical Data"

Advisors: Jerome P. Reiter and Fan Li

B.Sc. in Mathematics and Statistics, University of Lagos, Nigeria

2010

First class honors

Positions

Assistant Professor of the Practice

2020 - present

Social Science Research Institute, Duke University

Department of Statistical Science, Duke University (Secondary)

2019 - 2020Instructor

Social Science Research Institute, Duke University

Research Assistant 2014 - 2019

Department of Statistical Science, Duke University

Summer Research Fellow Summer 2017

U.S. Food and Drug Administration

2012 - 2013Analyst

KPMG Professional Services, Nigeria

Analyst 2011

Aterios Capital Limited, Lagos, Nigeria

Publications: Peer-reviewed & Invited Papers

1. Akande, O., Reiter, J. P., and Barrientos, A. F. (2019), "Multiple Imputation of Missing Values in Household Data with Structural Zeros," Survey Methodology, 45:2, 271-294.

- 2. **Akande, O.**, Barrientos, A. F., and Reiter, J. P. (2018), "Simultaneous Edit and Imputation For Household Data with Structural Zeros," *Journal of Survey Statistics and Methodology*, 0, 1-22.
- 3. Akande, O., Li, F., and Reiter, J. P. (2017), "An Empirical Comparison of Multiple Imputation Methods for Categorical Data," *The American Statistician*, 71:2, 162-170.

Publications: Manuscripts Under Review

- 4. **Akande, O.**, Madson, G., Hillygus, D. S., and Reiter, J. P., "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," revision submitted to *Journal of the Royal Statistical Society A.* [arXiv Link]
- 5. **Akande, O.** and Reiter, J. P., "Multiple Imputation for Nonignorable Item Nonresponse in Complex Surveys Using Auxiliary Margins," in volume in memory of Steve Fienberg, Springer.
- 6. Hu, J., **Akande, O.**, and Wang, Q., "Data imputation and data synthesis with the R package NPBayesImputeCat," submitted.

Publications: Articles in Preparation

7. **Akande, O.**, Hu, J., Wang, Q., and Reiter, J. P., "Edit-Imputation and Synthetic Data Generation For Household Data with the R package NestedCategBayesImpute," in preparation.

Presentations, Workshops & Posters

- 1. "Multiple Imputation for Nonignorable Item Nonresponse in Complex Surveys Using Auxiliary Margins," Contributed talk at Joint Statistical Meetings. August 2020.
- "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Contributed talk at Joint Statistical Meetings, Denver, CO. July 2019.
- "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Department of Statistical Science seminar series talk at Duke University, Durham, NC. March 2019.
- 4. "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at University of Toronto, ON, Canada. January 2019.
- 5. "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at Bucknell University, Lewisburg, PA. December 2018.
- "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at Duke University, Durham, NC. November 2018.
- 7. "Bayesian Simultaneous Edit and Imputation For Household Data with

- Structural Zeros," Contributed talk at Advances in Interdisciplinary Statistics and Combinatorics, Greensboro NC. October 2018.
- 8. "Bayesian Simultaneous Edit and Imputation For Household Data with Structural Zeros," Contributed talk at Joint Statistical Meetings, Vancouver, BC, Canada. July 2018.
- "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Contributed poster at Society for Political Methodology, Brigham Young University, Provo, UT. July 2018.
- 10. "Bayesian Simultaneous Edit and Imputation For Household Data with Structural Zeros," Seminar talk at Duke University, Department of Statistical Science. January 2018.
- 11. "Multiple Imputation of Missing Values in Household Data with Structural Zeros," Department of Statistical Science seminar series talk at Duke University, Durham, NC. February 2017.

Teaching

<u>Instructor</u>, Social Science Research Institute, Duke University

- IDS 702: Modeling and Representation of Data

Fall 2020

Fall 2019

<u>Instructor</u>, Department of Statistical Science, Duke University

– STA 602L: Bayesian and Modern Statistics	Summer II 2020
	Spring 2020
– STA 360: Bayesian and Modern Statistics	Summer II 2020
– STA 111: Probability and Statistical Inference	Summer I 2018
	Summer I 2016
	Summer II 2014

Guest Lecturer, Department of Statistical Science, Duke University

_	STA 210:	Regression Analysis ((undergrad)	Fall 2018
_	STA 723:	Statistics Case Studie	es (PhD level	Spring 2018

Teaching Assistant, Department of Statistical Science, Duke University

- STA 4	40: Case Studies (senior undergrad)	Fall 2018
- STA 7	23: Statistics Case Studies (PhD level)	Spring 2018
- STA 7	32: Theoretical Statistics (PhD level)	Spring 2017
- STA 1	11: Probability and Statistical Inference	Spring 2014

Software

NestedCategBayesImpute: R package for Modeling & Generating Synthetic Versions of Nested Categorical Data in the Presence of Impossible Combinations

(Wang, Q., Akande, O., Hu, J., Reiter, J.P. and Barrientos, A.)

TEACHING TRAINING	Duke Certificate in College Teaching Program	2019
Professional Service	Journal Reviews: Demographic Research	
University Service	Admissions Committee Co-Chair MIDS Program, SSRI, Duke University	2020 - present
	Student Mentor for incoming Ph.D. students Department of Statistical Science, Duke University	2018
	ASA DataFest@Duke Co-organizer and Instructor Department of Statistical Science, Duke University	2017 - 2019
Professional Affiliations	American Statistical Association Society for Political Methodology	2017 – present 2018 – 2019
Awards	$\frac{\text{Presidential Special Scholarship for Innovation \& Dev.}}{Federal\ Government\ of\ Nigeria}$ Full funding for masters degree	2013 - 2015
	University of Lagos Endowment Scholarship Program Cash award for first class students	2009 - 2010