

Leïla Njee Bugha

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Applied economist with substantial experience in driving impact evaluations, advancing research and delivering insights through causal inference, large-scale data analysis, and applied machine learning.

EDUCATION

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| PhD, Agricultural and Resource Economics , University of California, Berkeley | Expected 2026 |
| Specialization in Development Economics and Labor Economics, Applied Econometrics | |
| M.S, Economics and Public Policy , Sciences Po Paris, Ecole Polytechnique, ENSAE (France) | 2014 |
| B.A, Double Major: Economics and Sociology , Paris-Sorbonne University (France) | 2012 |

APPLIED RESEARCH & METHODOLOGICAL EXPERTISE

- Professional experience:

Graduate Research Assistant, *University of California, Berkeley* 2020-2024

- Conducted large-scale data cleaning, organization, and analysis to support long-term impact evaluation (A/B testing) of large-scale cash transfer program in Kenya
- Designed and executed web scraping initiatives using Python to compile references in economic literature

D-Lab Data Science Fellow, *University of California, Berkeley* 2023-2024

- Participated in practical programming working group for D-Labbers to improve data and research transparency practices (topics: efficient coding, data storage and management, code reproducibility, GitHub/Git);
- Instructed programming workshops for Stata, Python (spatial analysis; deep learning/machine learning) and R (spatial analysis and visualization) to novice and intermediate users in campus community (staff, students, etc.)

Graduate Student Instructor, *University of California, Berkeley* 2021-2024

- Taught programming skills (R) to undergraduate students as part of their econometrics sequence

Research Analyst, Poverty, Nutrition and Health, *International Food Policy Research Institute* 2016-2019

Research Intern, Markets, Trade and Institutions, *International Food Policy Research Institute* 2015-2016

- Led midline and endline surveys for national cash transfer program evaluation in Mali, training and supervising 35 enumerators, coordinating field operations across four regions, and managing data collection for 4,000 respondents.
- Executed rigorous data cleaning, statistical analysis, and technical reporting for three large-scale randomized control trials in West Africa (cash transfer, agriculture, and childhood malnutrition);

Intern, Directorate for Education and Skills, *Organisation for Economic Cooperation and Development* 2015

- Performed comprehensive literature reviews and executed benchmarking analyses to evaluate the comparative effectiveness of higher education systems across member countries.

Junior Analyst, Experimental Fund for Youth, *Youth, Urban Affairs and Sports Ministry* (France) 2014-2015

- Launched calls for innovative experiments and evaluated experimental designs and ability of designs to drive evidence-based policy-making on behalf of the Ministry
- Presented research outcomes to government stakeholders and subject-matter experts

- Research projects and applications:

"Spatial mismatch and employment in Nigerian cities"

- Built automated data pipelines processing satellite imagery along with administrative surveys with Python for geospatial analysis, engineering features and geometric polygon analysis.
- Implemented primary survey collection using a stratified sampling based on deep learning and satellite data for respondent identification, yielding one of the few individual-level surveys on commuting patterns in Nigerian cities

"Evaluating Sites-and-Services in Kenya and Tanzania Through Satellite Imagery" (with Max Wu)

- End-to-end machine learning pipeline for impact evaluation of historical World Bank redevelopment projects using difference-in-differences estimation

• Predict wealth across +1000 georeferenced enumeration areas using feature engineering, CNNs and Ridge regression

"Competition versus biology: Fertility dynamics in polygynous households in Mali"

- Tested whether co-wife competition and economic dependence drive fertility patterns in Malian households, using economic modeling such as duration analysis and heterogeneity testing

METHODOLOGICAL SPECIALIZATIONS & TECHNICAL SKILLS

- **Survey Research & Implementation:** Designed and managed surveys including large-scale RCTs; trained field teams and ensured data quality across complex field operations in multiple countries
- **Statistical Analysis & Causal Inference:** Expert in experimental design, A/B testing, difference-in-differences, synthetic control, propensity score matching, instrumental variables, regression discontinuity, and doubly robust models; Experience working with administrative surveys and census data for comparative analysis and policy evaluation
- **Quality Assurance & Mentorship:** Supervised research teams, provided methodological guidance to analysts, and established best-practice standards for reproducible research
- **Skills and Tools:** Python (highly proficient), R, Stata, SQL, Google Earth Engine, Jupyter, GitHub
- **Applied Machine Learning:** Linear Models and Non-linear models, Gradient Descent, Fairness and Bias in ML, Neural models and Deep Learning

STAKEHOLDER ENGAGEMENT & COMMUNICATION

- In research or policy:

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| D-Lab Data Science Fellow , <i>University of California, Berkeley</i> | 2023-2024 |
| • Moderated and participated in practical programming working group for D-Labbers to improve data and research transparency practices (topics: efficient coding, data privacy, data storage and management, code reproducibility, GitHub); | |
| Research Analyst, Poverty, Nutrition and Health , <i>International Food Policy Research Institute</i> | 2016-2019 |
| • Delivered research findings to government stakeholders, co-authored technical reports, and translated complex data insights into actionable, policy-relevant recommendations | |
| • Worked in large research teams, splitting responsibilities across research assistants, and coordinating analysis progress or data collection progress with principal investigators and implementing partners | |
| Junior Analyst, Experimental Fund for Youth , <i>Youth, Urban Affairs and Sports Ministry</i> (France) | 2014-2015 |
| • Worked conjointly with evaluators, implementers, topic experts, ministry officials and colleagues | |
| • Organized dissemination workshops to govt stakeholders and experts to capitalize on lessons learned from the experiments | |
| • Wrote capitalization notes and technical reports as requested, gathering insights from experimentation to inform policy | |

- Teaching experience:

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| Graduate Student Instructor , <i>University of California, Berkeley</i> | 2021-2025 |
| • Introductory Applied Econometrics (3 semesters): Received 2022 “Outstanding Graduate Student Instructor” award (awarded to top 10% of GSIs annually) | |
| • Statistics for Program Evaluation (1 semester) | |
| • Intermediate Microeconomics Applied to Natural Resources and Sustainability (2 semesters) | |
| Workshop Leader for First-Time GSI Teaching Conference , <i>University of California, Berkeley</i> 2023 (Fall), 2024 | |
| • Developed and instructed online training for future graduate student instructors in Quantitative Social Sciences | |
| Summer Instructor for Undergraduate Development Economics , <i>University of California, Berkeley</i> | 2023 |

FELLOWSHIPS & GRANTS

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| Ecole Normale Supérieure de Paris-Saclay, “Grande Ecole” Full Scholarship | 2011 - 2015 |
| Fundraised up to \$152,000 in research funds over 2019-2025 (details available upon request) | |

SERVICE & LEADERSHIP

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| Peer Partner to Development Impact West Africa Fellow , <i>Center for Effective Global Action</i> | 2021, 2024 |
| Leadership team in charge of Graduate Admissions , <i>Berkeley Economists for Equity</i> | 2021 - 2023 |
| - Organized and led online application bootcamp for >300 prospective applicants to Berkeley economics PhDs | |
| - Mentored underrepresented students in economics through program access initiatives | |
| Berkeley Economics Development Lunch Seminar Coordinator , <i>University of California, Berkeley</i> | 2021 - 2022 |
| Graduate Student Representative , <i>UC Berkeley’s Rausser College Advisory Board</i> | 2021 - 2024 |

LANGUAGES

French (native), English (bilingual), German (full proficiency)