

Benjamin A. Abijah

Statistical and data science methods for large-scale biomedical data

1. EDUCATION

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| University of Massachusetts, Amherst Ph.D. Biostatistics | Expected Sep 2026 |
| University of Massachusetts, Amherst M.S. Statistics | May 2023 |
| Kwame Nkrumah Univ. of Sci. & Tech., Ghana B.Sc. Statistics | Aug 2020 |

2. PROFESSIONAL MEMBERSHIP/ACCREDITATION/CERTIFICATION

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| Certificate, Statistical and Computational Data Science, University of Massachusetts, Amherst | Expected May 2026 |
| GStat, American Statistical Association | 2024 – present |
| Member, American Statistical Association (ASA) | 2024 – present |

3. SKILLS

* denotes “intermediate”

Computing: R, Python, git, SAS*, SPSS, SQL*, MATLAB*

Methods: Multiomics, Networks, Bioinformatics, Bayesian and Survival models, Machine Learning applications in health

Teaching: 5 years teaching – including assisting statistics courses of over 100 students, and mentoring 5 undergraduates

4. WORK EXPERIENCE

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| Research Assistant, Raji Lab, UMass Amherst | Aug 2023 – present |
| <ul style="list-style-type: none">Applying advanced statistical methods to analyze association of proteomics with CVD outcomes and detect critical sex differencesComparing a suite of multitask learning methods to identify selectively advantageous ones for feature selection of proteomics associated with CVD outcomes.Developing machine learning methods for multitask feature selection of protein biomarkers for CVDsPredicting particulate matter pollutant using land use models to estimate air pollution exposure | |
| Consulting Assistant, Statistical Consulting & Collaboration Services, UMass Amherst | May – Aug 2022 |
| <ul style="list-style-type: none">Provided statistical expertise for clients’ biomedical, pharmaceutical, and entomology projectsDirectly supported clients’ research from data ingestion through analysis implementation and helped to translate findings into actionable health solutions | |

5. PUBLICATIONS AND MANUSCRIPTS

- Frempong, N.K., Berchie, R.O., Baidoo, R., **Abijah, B.A.**, & Oforiwaa-Amanfo, O.Y. (2021). A Simulation Study to Examine the Bias of Some Sample Measures of Skewness. *Applied Mathematical Sciences*, 15(4), 189-200.
<https://doi.org/10.12988/ams.2021.914276>
- Abijah, B.A.**, Spracklen, C., Janiczek, M., Rexrode, K.M., Balasubramanian, R. Sex Differences in Proteomics for Ischemic Stroke in the UK Biobank Study (**in progress**)
- Abijah, B.A.** & Balasubramanian, R. A Tutorial on Multitask Learning Methods for Proteomics Feature Selection for CVD outcomes (**in progress**)
- Abijah, B.A.**, Mottey, B., Janiczek, M., Balasubramanian, R. & Arku, R. Land Use Regression Models for Predicting PM_{2.5} for Epidemiologic Studies in Africa: A Comparative Analysis from Accra and Kigali. (**in progress**)

6. SELECTED PROJECTS

- Longitudinal Analysis of Diabetes Progression in Medicare Patients Using Claims Data. 2025.
- Estimating Infertility Prevalence by Applying a Bayesian Current Duration Approach to Demographic and Health Survey Data. 2024.
- Identifying Single-nucleotide polymorphisms (SNPs) associated with Asthma. 2024.
- A Bayesian Simulation: the case of Mis-specified Data Generating Process. 2024.
- An Exploration of Heart Failure Clinical Data. 2023.
- Mis-specifying the Variance: Does Clustering Affect Estimates? 2023.
- Cox Proportional Modeling of Cancer Patients' Recurrence-free Survival. 2022.
- Socio-economic Inequalities in Childhood Mortality in Ghana. 2020.

7. SELECTED AWARDS AND HONORS

- SPHHS Dean's Fellowship Award, UMass Amherst. 2023 – 2025. \$30,000
- Travel Grant, UMass Amherst. 2025. \$900
- Barclays Bank Scholarship, Barclays Bank Ghana. 2017 – 2020. \$3,000
- Valedictorian, 54th Congregation, College of Science, KNUST

8. TRAININGS AND WORKSHOPS

- Practical Considerations for Adaptive Clinical Trials Using Bayesian and Frequentist Methods. Joint Statistical Meetings, American Statistical Association. 2025.
- Causal Inference in Randomized Controlled Trials. Joint Statistical Meetings, American Statistical Association. 2025.
- Statistical Considerations in Cell and Gene Therapy Development. Joint Statistical Meetings, American Statistical Association. 2025.
- Optimization for Data Science and Machine Learning Problems. New England Statistics Symposium. 2025.
- Fundamentals of Causal Inference With R. Boston Chapter, American Statistical Association. 2024.
- SHARP Training in Mendelian Randomization. Columbia University Mailman School of Public Health. 2024.

9. SELECTED LEADERSHIP AND VOLUNTEER ACTIVITIES

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| Student Representative, Department of Biostatistics and Epidemiology, UMass Amherst | 2025 – present |
| Chair, Education and Mentorship, EKO Global Foundation - Worldwide | 2022 – present |
| Chair, Social Media Committee, African Graduates and Scholars' Association, UMass Amherst | 2022 – 2023 |
| Member, Strategic Planning Committee, Science Students Association, KNUST | 2019 |
| Chair, Academic Committee, Association of Mathematics and Statistics Students, KNUST | 2018 – 2019 |