

Emmanuel Anguah Afriyie

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RESEARCH INTERESTS

- Spatial optimization
- Transportation and health geographies
- Natural Hazards
- Geographic Information Science and Technology (GIST)

EDUCATION

- 2028 **Ph.D** in Geography. University of Tennessee, Knoxville, Tennessee, USA
- 2024 **M.S.** in Geoscience (Geospatial analysis concentration). East Tennessee State University, Tennessee, USA.
Thesis: Spatio-temporal patterns in heavy precipitation, flash flooding, and flooding: assessing and communicating imminent threats via an interactive dashboard
- 2013 **B.A.** in Geography. University of Ghana, Legon, Ghana.
Thesis: Towards the expansion of urban railway transportation: prospects and challenges.

RELEVANT EXPERIENCE

- 2024-Present **Graduate Teaching Assistant.** Natural Hazards, World Geography, Geo-visualization and Geographic Information for Researchers and Professionals. *Department of Geography and Sustainability, University of Tennessee, Knoxville.*
- 2023 **Summer Intern.** *Tennessee State Climate Office.* Worked on the Tennessee State Hazard Mitigation Plan (SHMP) GIS analysis and documentation. May – August 2023.
- 2023 **Research Assistant.** *Hydrology and Karst Watershed Resources at Rocky Mount Historic Site.* February – March 2023. East Tennessee State University. Tennessee, USA.
- 2023-2024 **Lab Coordinator.** Earth and Society Labs (1041 Labs). East Tennessee State University. Tennessee, USA.
- 2022-2024 **Graduate Teaching Assistant.** Earth and Society Labs (1041 Labs). East Tennessee State University. Tennessee, USA.
- 2021-2022 **Production, Research & Development Manager.** *Nikoi Concepts Studios. Accra – Ghana*
- 2015-2021 **Digital Resources and IT Support Specialist.** *Presbyterian Church of Ghana, Christ Congregation Adentan, Accra, Ghana.*

2013-2014 **Teaching / Research Assistant.** *Department of Geography and Resource Development – University of Ghana, Legon. Accra, Ghana.*

PAPERS

- 2024 Exploring Spatiotemporal Patterns in Hazardous Hydrologic Events: Assessment, Communication, and Mitigation Through Geospatial Technologies". (Master's thesis: unpublished)
- 2023 Harris, J.B., Joyner, T.A., Tollefson, W.C., Luffman, I., Afriyie, E., Beer, M., Holmes, T., Olawuyi, F., Ernenwein, E., Nandi, A., Quinn, M. Tennessee State Hazard Mitigation Plan 2023 Update – Risk and Vulnerability Assessments, pp. 934. Submitted August 2023 (Reviewed by TEMA & FEMA), Approved October 2023.
- 2023 Afriyie E, & Luffman I, (2023). Spatiotemporal analysis of flash flooding in Tennessee Counties: 1996-2021. *In Proceedings of the 2023 Tennessee Water Resources Symposium*. April 12-14, 2023. <https://tnawra.org/2023-twrs> (conference proceedings)
- 2023 Luffman I, McSweeney R, & Afriyie E, (2023). Karst water resources at Rocky Mount Historic Site. *In Proceedings of the 2023 Tennessee Water Resources Symposium*. April 12-14, 2023. <https://tnawra.org/2023-twrs> (conference proceedings)

PRESENTATIONS

- 2025 Assessing Spatial Disparities in Dental Health Accessibility in Tennessee. AAG 2025. Detroit, Michigan. March 25, 2025 (Talk)
- 2024 Exploring spatiotemporal patterns in hazardous hydrologic events in Tennessee and mitigation through geospatial technologies. NET GIS Meeting. March 11, 2024. **(Talk)**
- 2023 Spatiotemporal analysis of flash flooding in Tennessee Counties: 1996-2021. *Tennessee Water Resources Symposium*. Nashville, Tennessee. April 14, 2023 **(2nd Place winner, Graduate Poster competition)**.
- 2023 Spatiotemporal analysis of flooding in Tennessee counties: 1996-2021. *Appalachian Students Research Forum 2023*. East Tennessee State University, Johnson City. April 25, 2023. **(Poster)**
- 2023 Spatiotemporal patterns in extreme hydrologic events in Tennessee counties. American Association of Geographers (AAG) Denver. March 27, 2023. **(Talk, second author)**
- 2023 Flash flooding in Tennessee: spatiotemporal trends and hot spots (1996-2022). *Geological Society of America (GSA Connects)*. Pittsburgh, Pennsylvania. October 15, 2023. **(Poster)**

- 2023 Spatial-temporal analysis of flash floods in Tennessee regions and counties (1996-2022): Identifying trends and emerging hotspots for hazard mitigation and emergency response planning. Southeastern Division of American Association of Geographers Conference (SEDAAG) Norfolk, Virginia. November 20, 2023. **(Talk)**
- 2023 Climate Trends and Variations Impacting Hazards in Tennessee: Exploring the 2023 Tennessee State Hazard Mitigation Plan Update. *Southeastern Division of American Association of Geographers Conference (SEDAAG)* Norfolk, Virginia. November 20, 2023. **(Poster, multiple authors)**

HONORS AND AWARDS

- 2022 **Finalist.** Three Minute Thesis Competition (3MT). Surviving a Flash Flood in Tennessee: Hotspots and Warnings. November 9, 2022.
- 2023 **Second place winner** in Graduate Division of Student Poster Competition. Tennessee Water Resources Association (TNAWRA) Conference. April 13, 2023.
- 2023 **Geosciences Support Scholarship.** Dr. Michael and Mina Marchioni Geoscience Graduate Support Scholarship. April 20, 2023.
- 2023 **Student Publication Award.** Department of Geosciences, East Tennessee State University. April 20, 2023.
- 2024 **Outstanding Graduate in Geospatial Science.** Department of Geosciences, East Tennessee State University. May 2024.
- 2025 **Gilbert F. White Thesis Award.** Prestigious National Award from the Hazards, Risks, and Disasters Specialty Group of the American Association of Geographers (AAG). For MS thesis titled "Exploring Spatiotemporal Patterns in Hazardous Hydrologic Events: Assessment, Communication, and Mitigation Through Geospatial Technologies".