

Ebenezer Nana Kwaku Boateng

eboaten4@asu.edu

orcid.org/0000-0002-3911-5345

Education

Doctor of Philosophy in Geography and Regional Planning	2023
Bachelor of Science in Geography and Regional Planning	2017
<i>University of Cape Coast</i>	<i>Cape Coast, Ghana</i>

Employment History

Arizona State University

Post Doctoral Scholar

March 2024 – Present

Knowledge Exchange for Resilience Center, School of Geographical Sciences and Urban Planning.

Assisting Prof. Solis in research activities

Developed an extreme heat mapping workflow.

Department of Geography and Regional Planning, University of Cape Coast

Graduate Assistant

January 2020 – March 2024

Teaching, assisting lecturers in class, organizing tutorials, making maps and collecting field data

Acquired some relevant skills in statistical analysis, geospatial analysis and field surveys that assist me in my teaching as a graduate assistant.

Teaching Assistant

August 2017 – July 2018

Assisted lecturers in class, organizing tutorials, making maps, training New YouthMappers and Collecting Field Data

Making the national illegal mining map and helping organize the 2017 GIS Day Celebration

Town and Country Planning Department, Kumasi, Ghana

Intern

June 2015 – July 2015

Created maps using GIS software Participated in street naming project.

Updated three sub-metro maps of Kumasi Metropolis.

Areas of Specialization: Geographic Information Systems (GIS), Remote Sensing, Surveying and Cartography, Natural Resources Management, Environmental Monitoring, Public Health

Achievements/Awards

- Brew Butler Postgraduate Research Grant (2020/2021 academic year), School of Graduate Studies, University of Cape Coast, Ghana. Fund: GhC 5000.
- 2017 YouthMappers Leadership Fellow

Workshops/Conferences/Seminars

July 14-18 th 2025	ESRI User Conference, San Diego, California, USA. Presenter- “Youth-Led, Community-Focused: The Power of YouthMappers in Local and Global Resilience”
March 24-28 th 2025	2025 AAG Annual Conference, Detroit, Michigan, USA. Presenter - “Transforming Vacant Lots: Bare Data Essentials for Urban Development Decisions that Address Heat Resilience and Social Equity”
November 6-9 th 2024	ACSP2024 Conference, Seattle, Washington, USA. Role: Presenter – “Transforming Vacant Lots: Bare Data Essentials for Urban Development Decisions that Address Heat Resilience and Social Equity”
October 17 th 2024	Mapping Your Future with Geo AI. Organised by the Map and Geospatial Hub, Hayden Library, Arizona State University, Tempe. Role: Participant
September 26 th – 27 th 2024	2024 SW-IFL All Hands Meeting. Role: Poster presenter – “Transforming Vacant Lots: Bare Data Essentials for Urban Development Decisions that Address Heat Resilience and Social Equity”
September 10 th – 12 th 2024	2024 Innovative4Cities Conference, Montreal, Canada. Role: Presenter – “Extreme Heat Mapping: YouthMappers to the Rescue”
September 3 rd – 4 th 2024	Southwest Sustainability Innovation Engine (SWSIE) Water Innovation & Sustainability for Commercial, Industrial (CII) Sector Research Needs Workshop at

	SkySong, Scottsdale. Role: Participant
July 15 th – 19 th 2024	ESRI User Conference, San Diego-California, United States of America. Role: Virtual Participant
June 9 th – 16 th 2024	2024 YouthMappers Leadership Fellowship, Bangkok- Thailand. Role: Navigator and Instructor
March 26 th 2024	The Importance of ‘Place’in Understanding and Ameliorating Disparities in Health, Spatial Analysis Research Center (SPARC), the Urban Climate Research Center (UCRC) and the School of Geographical Sciences and Urban Planning, Memorial Union, Tempe, Arizona State University, United States of America. Role: Participant
August 30 th - September 2 nd 2023	Ghana Geographers Association Annual Conference 2023, University of Cape Coast, Central Region, Ghana. Role: Presenter – “Spatial and Multivariate Assessment of Water Access for Sustainable Agricultural Intensification in Semi-Arid Ghana”
November 16 th -19 th 2022	Ghana Geographers Association Annual Conference 2022, University of Cape Coast, Volta Region, Ghana. Role: Local Organising Committee Member
September 15 th -17 th 2021	Tropentag Annual Conference (Hybrid). Role: Presenter - “Smallholder Farmers’ Perspective on Sustainable Agriculture Intensification in the Guinea Savannah Agro-Ecological Zone of Ghana”
August 25 th – 30 th 2021	Writing workshop – DAAD-funded SDG Graduate School (Performing Sustainability: Cultures and Development in West Africa-UCC) Ghana and the School of Graduate Studies, UCC. Ampiaba Hotel, Batanyaa, Ghana. Role: Participant
February 26 th 2020	Multi-sector training workshop on drowning prevention. Collaborators – University of Cape Coast, Kwame Nkrumah University of Science and Technology and the Harborview Injury Prevention and Research Center, University of Washington, USA. Pempamsie Hotel, Cape Coast. Ghana. Role: Participant

February 17 th – 22 nd 2020	Integrated Decision Support System (IDSS) Workshop. Specialised in Soil Water Assessment Tool (SWAT). Collaborators – University of Cape Coast and Texas A&M University. Faculty of Social Sciences, University of Cape Coast. Role: Participant
October 15 th – 19 th 2019	2019 China–Ghana Urban Forum. Confucius Institute and Department of Geography and Regional Planning, University of Cape Coast, Ghana. Role: Presenter – “Land Use Land Cover Change on Urban Agriculture at Tarkwa Nsuaem Municipality, Ghana”
August 2 nd – 6 th 2017	Ghana Geographers Association Annual Conference 2017. Ho, Volta Region, Ghana. Role: Presenter – “Land Use Land Cover Change at Tarkwa Nsuaem Municipality, Ghana”
July 17 th -21 st 2017	2017 Africa Open Data Conference. National Conference Centre, Accra, Ghana. Role: Participant
May 21 st – 30 th 2017	2017 Youth Mappers Leadership Fellowship. Kathmandu, Nepal. Role: Participants

Teaching Experience

Arizona State University (2025)

Spring Semester

GIS 311: Geographic Information Science III

University of Cape Coast (2020-2024)

First Semester

GRP 101: Introduction to Geospatial Sciences

GEO 213: Introduction to Cartography and Surveying

GEO 215: Introduction to GIS and Remote Sensing

GEO 318: Surveying and Cartography

GEO 325: Statistical Methods and Analysis 1

GEO 335: Landscape Ecology

GEO 433: Remote Sensing & Cartography

Second Semester

GEO 205: Map Reading and Interpretation

GEO 338: GIS and Remote Sensing

GRP 402: Landscape Architecture and Planning

GEO 432: Geographic Information System

GEO 499 Project work

Academic Projects/Grants

- i. September-October 2024: Models for planning multifunctional and equitable green infrastructure to mitigate rising stormwater and heat risks in cities. NCAR program. Role: **Remote sensing analyst**.
- ii. March-July 2024: Transforming Vacant Lots into Community Assets: A Vision for Resilient Urban Landscapes. Sponsor- Southwest Urban Corridor Integrated Field Laboratory (SWIFL). Role: **Co-investigator**.
- iii. March-May 2024: Secondary School Curriculum Perception Study. Sponsor- National Council for Curriculum and Assessment (NaCCA), Ghana. Role: **Data manager**
- iv. October- December 2023: Student's perspectives on the study of STEM in primary and secondary schools in Ghana. Sponsor- Transforming Teaching Education and Learning (T-TEL), Ghana. Role: **Data manager**
- v. September 2023: Co-designing an inclusive landscape management plan (ILMP): pathways for scaling land and water bundled innovations. A multistakeholders' dialogue to develop an inclusive landscape management plan (ILMP) for Ahafo Ano South West District. Sponsor- International Water Management Institute. Role: **Research assistant and geospatial analyst**.
- vi. August-October 2023: Resources capacity for water, sanitation and hygiene (WASH) services delivery in the Fanteakwa North District, Ghana. Sponsor-World Vision. Role: **Co-investigator**, GhC 100,000 (US\$9090.91).
- vii. March 2023: Understanding social ecological landscape dynamics for sustainable and resilient agri-food systems by International Water Management Institute (IWMI)-Ghana. Role: **Research assistant and facilitator**.
- viii. 2021-2022: MIGRAWARE. Role-project team member and served as the data manager.
- ix. 2018 – 2022: Socio-Ecological System Approach towards a Sustainable Intensification of Agriculture Production in Sub-Saharan Africa (SESASA). Study Area – Upper East Region (Bolgatanga Municipal and Bongo District). Sponsor – European Union through Leap Agri. Role: **Project team member – data collection and analysis**.
- x. February 2019: Farmer Profiling for International Institute for Tropical Agriculture (IITA Ghana). A project which had a dual purpose of profiling farmers under the Africa RISING Project and gathering data to evaluate the progress of the Africa RISING project. Study Area – Northern Region, Upper East Region and Upper West Region). Role: **Project Team Member – led the data collection using KoBo Toolbox**.
- xi. August 2018: Studying the soy processing facilities in Kumasi and its environs. Study Area – Kumasi, Sunyani and Techiman. Role: **Project Team Member (Field assistant and map maker)**.

Publications

Referred Journal Articles

- i. Sobhaninia, S., Solis, P., **Boateng, E. N.**, Gould, R., & Heid, J. (2026). Planning for cooler communities: Vacant lots as components of heat resilience in MESA, ARIZONA. *Geographical Review*, 1-25. <https://doi.org/10.1080/00167428.2025.2587590>

- ii. Sobhaninia, S., Solis, P., **Boateng, E. N.**, & Buo, I. (2026). A framework for strategic transformation of vacant lots for heat resilience. *Journal of Environmental Management*, 398, 128540. <https://doi.org/10.1016/j.jenvman.2025.128540>
- iii. **Boateng, E. N.**, Atampugre, G., Solis, P., Mariwah, S., Mensah, I., Furst, C., & Nyarko, B. K. (2025). Smallholders' perspectives on sustainable agriculture intensification in Northern Ghana. *Sustainable Futures*, 10, 101140.
- iv. Solís, P., Balogun, I.A., Aladejana, O.O., Avery, R.H., Nealon, R., Manyungwa, Z., Blevins, C., Alsanad, A., **Boateng, E.N.K.**, & Adamu, A.M. (2025). Engaging local university students in participatory mapping for heat resilience to electrify health facilities in Africa. *International Journal of Sustainability in Higher Education*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/IJSHE-09-2024-0644>
- v. Okyere, Y. M., Aboagye, R. G., **Boateng, E. N. K.**, Okyere, J., Osborne, A., & Ahinkorah, B. O. (2025). Spatial distribution and factors associated with unmet need for contraception among women in Ghana. *Reproductive Health*, 22(1), 31. <https://doi.org/10.1186/s12978-024-01935-6>
- vi. **Boateng, E. N. K.**, Adjakloe, Y. A., Adu-Gyamfi, A. B., et al. (2025). Socio-economic determinants and spatial analysis of access to sanitation among older adults in Ghana. *Discover Social Science & Health*, 5(12). <https://doi.org/10.1007/s44155-025-00160-1>
- vii. Abu, I. O., Thiel, M., Nyamekye, C., Asare, Y. M., Agyapong, E., Agbemor, B., **Boateng, E. N. K.**, ... & Taubenböck, H. (2025). How Do Rural Industrial Sites Impact Migrant Motives and the Socio-Economic Conditions of Local and Migrant Populations?. *Scientific African*, e02546. <https://doi.org/10.1016/j.sciaf.2025.e02546>
- viii. **Boateng ENK**, Atampugre G, Mariwah S, Mensah I, Johnson FA, Furst C, et al. (2024) Spatial and multivariate assessment of access to water for sustainable agriculture intensification in semi-arid Ghana. *PLOS Water* 3(10): e0000283. <https://doi.org/10.1371/journal.pwat.0000283>
- ix. Okyere, J., Ayebe, C., **Boateng, E. N.**, Assie, R. A., Odoi, A., Dzirassah, K. D., ... & Dickson, K. S. (2024). Spatial distribution and determinants of physical intimate partner violence among women in Kenya: Evidence from the 2022 Kenya Demographic and Health Survey. *PloS one*, 19(8), e0309173. <https://doi.org/10.1371/journal.pone.0309173>
- x. Addo, I. Y., Acquah, E., Nyarko, S. H., Dickson, K. S., **Boateng, E. N.**, & Ayebe, C. (2024). Exposure to pro-tobacco and anti-tobacco media messages and events and smoking behaviour among adolescents in Gambia. *BMC Public Health*, 24(1), 1041. <https://doi.org/10.1186/s12889-024-18543-5>
- xi. Nyarko, S. H., **Boateng, E. N.**, Dickson, K. S., et al. (2023). Geospatial disparities and predictors of anaemia among pregnant women in Sub-Saharan Africa. *BMC Pregnancy and Childbirth*, 23(743). <https://doi.org/10.1186/s12884-023-06008-3>
- xii. Aboagye, R. G., **Boateng, E. N.**, Okyere, Y. M., Okyere, J., Dickson, K. S., Seidu, A. A., & Ahinkorah, B. O. (2023). Spatial distribution and factors associated with health insurance subscription among women in Ghana. *International Health*, ihad092. <https://doi.org/10.1093/inthealth/ihad092>
- xiii. Dickson, K. S., **Boateng, E. N.**, Adzrago, D., Addo, I. Y., Acquah, E., & Nyarko, S. H. (2023). Silent suffering: unveiling factors associated with women's inability to seek help for intimate partner violence in sub-Saharan Africa (SSA). *Reproductive health*, 20(1), 110. <https://doi.org/10.1186/s12978-023-01651-7>

- xiv. Dickson, K. S., **Boateng, E. N.**, Adde, K. S., Ameyaw, E. K., & Munro-Kramer, M. L. (2023). Non-adherence to WHO's recommended 8-contact model: geospatial analysis of the 2017 Maternal Health Survey. *BMC Pregnancy and Childbirth*, 23(1), 1-16. <https://doi.org/10.1186/s12884-023-05504-w>
- xv. Addo, I. Y., Acquah, E., Nyarko, S. H., **Boateng, E. N.**, & Dickson, K. S. (2023). Factors associated with unskilled birth attendance among women in sub-Saharan Africa: A multivariate-geospatial analysis of demographic and health surveys. *Plos one*, 18(2), e0280992.
- xvi. Dickson, K. S., **Boateng, E. N.**, Acquah, E., Ayebeng, C., & Addo, I. Y. (2023). Screening for cervical cancer among women in five countries in sub-Saharan Africa: analysis of the role played by distance to health facility and socio-demographic factors. *BMC Health Services Research*, 23(1), 1-10.
- xvii. Acquah, E., Nyarko, S. H., **Boateng, E. N.**, Dickson, K. S., Addo, I. Y., & Adzrago, D. (2022). Spatial and multilevel analysis of unskilled birth attendance in Chad. *BMC Public Health*, 22(1), 1-19. <https://doi.org/10.1186/s12889-022-13972-6>
- xviii. Tsekpetse-Akuamoah, K., Mariwah, S., **Boateng, E. N. K.**, & Adjakloe, Y. A. (2022). Impact of COVID-19 on community-led total sanitation (CLTS) in Ghana: perspectives of implementing partners. *Journal of Water, Sanitation and Hygiene for Development*, 12(4), 387-393. <https://doi.org/10.2166/washdev.2022.016>
- xix. Adjakloe, Y. D., **Boateng, E. N.**, Osei, S. A., & Agyapong, F. (2021). Gender and households' choice of clean energy: A case of the Cape Coast Metropolis, Ghana. *Social Sciences & Humanities Open*, 4(1), 100227.
- xx. Bediako, V. B., **Boateng, E. N. K.**, Owusu, B. A., & Dickson, K. S. (2021). Multilevel geospatial analysis of factors associated with unskilled birth attendance in Ghana. *PLoS ONE*, 1–20. <https://doi.org/10.1371/journal.pone.0253603>
- xxi. Zume, J. T., Mariwah, S., & **Boateng, E. N.** (2021). Evaluating the impacts of on-site sanitation facilities and saltwater intrusion on shallow groundwater quality in peri-urban communities of Cape Coast, Ghana. *Environmental Monitoring and Assessment*, 193(5), 1-26.
- xxii. **Boateng, E. N. K.** & Mensah C.A. (2021). Land use/land cover dynamics and urban agriculture in Tarkwa-Nsuaem Municipality, Ghana. *Theoretical and Empirical Researches in Urban Management*, 16-2.
- xxiii. Solís, P., Rajagopalan, S., Villa, L., Mohiuddin, M. B., **Boateng, E.**, Wavamunno Nakacwa, S., & Peña Valencia, M. F. (2020). Digital humanitarians for the Sustainable Development Goals: YouthMappers as a hybrid movement. *Journal of Geography in Higher Education*, 1-21.
- xxiv. Adjakloe, Y. D., Osei, S. A., **Boateng, E. N.**, Agyapong, F., Koranteng, C., & Baidoo, A. N. (2020). Household's awareness and willingness to use renewable energy: a study of Cape Coast Metropolis, Ghana. *International Journal of Sustainable Energy*, 1-18.
- xxv. Adjakloe, Y., **Boateng, E.**, Agyapong, F., Aboagye, S., Koranteng, C., Baidoo, A., and Amoako-Sakyi, R. (2020): Gendered Perspective on Road Crossing Behaviours: A Study of University of Cape Coast Students. *Current Research Journal of Social Sciences*. Vol. 03, No. (1).

Book Chapters

- i. Odame, P. K., & **Boateng, E. N. K.** (2023). Leveraging Spatial Technology for Agricultural

- Intensification to Address Hunger in Ghana. In *Open Mapping towards Sustainable Development Goals* (pp. 29-45). Springer, Cham.
- ii. **Boateng, E. N.**, Manyungwa, Z., & Anderson, J. (2023). Assessing YouthMappers Contributions to the Generation of Open Geospatial Data in Africa. In *Open Mapping towards Sustainable Development Goals* (pp. 171-179). Springer, Cham.

Technical Reports

- i. Atampugre, G., Tilahun, S. A., Owireko, I. O., Owusu-Amofah, S. B., Amponsah, A. K., Cofie, O., Adusei-Gyamfi, J. & **Boateng, E.** (2023). *Inclusive landscape management plan for the transformation of agrifood systems in Ahafo Ano Southwest District of Ghana*. Colombo, Sri Lanka: International Water Management Institute (IWMI). CGIAR Initiative on West and Central African Food Systems Transformation. 34p.
- ii. Mariwah, S., Adu-Gyamfi, A. B., Adjakloe, Y. A. & **Boateng, E.N.K.** (2023). *Resource Capacity for Water, Sanitation and Hygiene (WASH) Services Delivery in the Fanteakwa District, Ghana*. Begoro: World Vision Ghana.
- iii. Atampugre, G., Mensah, E., **Boateng, E.**, Mabhaudhi, T., & Cofie, O. (2022). *Situational analysis of a social-ecological landscape in the Ahafo Ano Southwest District of Ghana*.
- iv. Studying the soy processing facilities in Kumasi and its environs. Study Area – Kumasi, Sunyani and Techiman (2018).

Undergraduate Supervision (UCC)

2021/2022 Academic year

Research Topic	Name of Student	Status (year)
i. Factors affecting efficient landuse management in the Cape Coast Metropolis	Debrah Albert Brako	Completed (2022)
ii. Patterns and factors associated with the stress level among university students: a case study of UCC students	Kwofie Anastasia	Completed (2022)
iii. Assessing the use of GIS and remote sensing in spatial planning: a case study of the Mfantseman Municipal Assembly	Evans Aidoo	Completed (2022)
iv. Greening in urban areas: a case study of Cape Coast	Quartey Samuel Nii Kwartei	Completed (2022)
v. Integrating urban agriculture through home gardening introduction, a case study in Cape Coast.	Dennis Fosu	Completed (2022)

2022/2023 Academic year

Research Topic	Name of Student	Status (year)
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i.	Assessing Biophysical Factors Affecting Land Cover Changes in Jirapa, Upper West Region of Ghana	Keziah Dombo	Completed (2023)
ii.	Assessing Urban Vulnerability to Floods using Multicriteria Analysis in the Accra Metropolitan Assembly (AMA)	Regina Gyambea	Completed (2023)
iii.	Assessing the impact of Land Use Land Cover Change and Climate Change on the Spatiotemporal Variations on the Weija Dam, Accra	Theodora M. Fletcher	Completed (2023)
iv.	Spatiotemporal Changes in Wetlands and Its Effects on Sustainable Livelihood in the Jomoro District	Raphael Sanzah	Completed (2023)
v.	Monitoring Mangrove Stands in Iture Using Linear Spectral Unmixing	Kwadwo Agyenim Boateng	Completed (2023)
vi.	Assessing the Effects of Urban Sprawl on the Leisure of Residents at Kakumdo, Cape Coast Metropolis	Isaac Assabil	Completed (2023)
vii.	Examining Local's Perception of the Ecological Functions of the Kakum River in Cape Coast Metropolis.	Edward Frimpong	Completed (2023)
viii.	Analysis of Land Use Land Cover Change and Its Implications for Sustainable Agriculture Intensification in Lower Manya Krobo Municipal	Simon Odonkor	Completed (2023)
ix.	Assessing the Spatiotemporal Variation of the Veia Dam and its implication for sustainable agriculture intensification	Stacy Wilson	Completed (2023)
x.	Urban residents' awareness of the impact of household activities on climate change; a case of Ga Central	Lissah Rosemond Seyram	Completed (2023)
xi.	Effects of sleep deprivation on the psychological well-being and academic performance of students at the University of Cape Coast	Gloria Agyei	Completed (2023)
xii.	Analysing land use land cover changes and its socio-economic impacts on the landscape of Lower Manya Krobo	Emmanuel Kpabitey	Completed (2023)
xiii.	Assessing water challenges faced by UCC students staying at Kwapraw	Amoah Ghaffaru Atibire	Completed (2023)

Community Service

2024 – Present YouthMappers ArcGIS Administrator, Global Network (80 countries)

2019 – 2024 UCC YouthMappers Coordinator, University of Cape Coast, Ghana

Skills

- i. Computer Skills: Microsoft Office, SPSS, STATA, MaxQDA, Map Maker, QGIS, ArcGIS, Erdas Imagine, Pix4D, Google Earth Engine, and JOSM
- ii. Technical Skills: Field survey (KoBo ToolBox), Mapmaking (geospatial analysis), and Coding (Python, JavaScript)

Professional Development

- i. ESRI - Make an Impact with Modern Geo Apps (2025)
- ii. ESRI - Deep Learning Using ArcGIS Pro (2025)
- iii. ESRI - Going Places with Spatial Analysis (2025)
- iv. ESRI - Introduction to ArcGIS API for Python (2024)
- v. ESRI - ArcGIS Online Basics (2024)
- vi. ESRI - ArcGIS Pro Basics (2024)
- vii. CITI - Responsible Conduct of Research (2024)

Professional Membership

2024 – Present American Association of Geographers (AAG)
2017 – Present Ghana Geographers Association (GGA)
2024 – Association of Collegiate Schools of Planning (ACSP)