

Elizabeth Jane Wesley

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SUMMARY

- Innovative and creative environment & public health researcher with a strong background in GIS, statistics, and machine learning methods for the spatial and temporal modeling of highly complex social, climatic, and environmental phenomena
- Detail-oriented data scientist with excellent verbal, written, and visual communication skills for translating research to be accessible to both technical and non-technical audiences, resulting in 1 peer-reviewed publication and 3 conference presentations
- Interdisciplinary problem solver who thrives in dynamic, diverse, and collaborative environments with excellent project and data management skills and a passion for action-oriented research, identifying transformative solutions for environmental challenges facing cities, and advancing social equity and environmental justice

EXPERIENCE

Environmental Health Researcher, PhD Candidate—University of Kansas

June 2018-July 2022

- Researched racial disparities in environmental health outcomes by analyzing and interpreting the interactions between public health, environmental, social, and climatic systems using spatial and Bayesian methods with research leading to multiple American Geophysical Union (AGU) conference presentations and a doctoral dissertation
- Performed statistical analysis and data visualization requiring strong attention to detail, effective data management, extensive data wrangling, and the visual communication of quantitative data
- Managed and maintained multiple data projects under minimal supervision while also working effectively as lead member of an interdisciplinary team requiring the establishment and maintenance of partnerships and communicating effectively with diverse audiences
- Coached, guided, and mentored master's students in data management, statistical analysis, and career development

Lecturer and Lab Instructor, Graduate Teaching Assistant—University of Kansas

August 2019-May 2022

- Provided theoretical and technical instruction to undergraduates with little to no experience in the subjects of Geographic Information Systems, Methods of Analyzing Geographic Data, Remote Sensing, and Climate & Climate Change including supervising and mentoring students
- Designed training materials to guide student understanding including creating presentations, developing audio-visual media for online instruction, building instructional toolkits, and organizing and presenting materials in a manner accessible to a broad range of skill and experience levels

Urban Geography Researcher, Graduate Research Assistant—University of Kansas

June 2018-August 2019

- Performed innovative geospatial analysis of urban heat and greenspace, leading to a peer-reviewed first author publication in *Remote Sensing* and a presentation at the American Association of Geographers (AAG) annual conference and a master's thesis
- Acquired, maintained, managed, and analyzed satellite imagery to support analysis of the urban surface, accompanied by extensive process documentation
- Applied knowledge of the urban heat literature to develop novel data-driven research on how the surface characteristics of urban areas influence the distribution of environmental burdens and benefits

GIS Analyst, Graduate Research Assistant—Kansas Biological Survey, University of Kansas

Jan 2015-May 2018

- Implemented the Lesser Prairie Chicken Range-wide Conservation Plan for the Western Association of Fish and Wildlife Agencies through GIS analysis, web mapping, map production, QAQC, workflow development, and technical documentation
- Quantified the environmental impacts of oil and gas development to determine resources, conditions, and trends requiring the management of specialized datasets including satellite imagery, ground surveys, and aerial surveys
- Collaborated with and provided liaison between field personnel and industry professionals to collect field data and translate into geospatial data and cartographic products
- Created metadata and process documentation for both technical and non-technical audiences, established workflows for effective information transfer, and suggested improvements to ensure quality control

SKILLS

Programming —R (tidyverse, high proficiency), Python, SQL, Stata	Project management
Geospatial analysis —ArcGIS (high proficiency), ArcGIS Online, QGIS, Google Earth Engine, ERDAS	Communication
Statistics —Bayesian, spatial, regression, multiscale	Complex analysis
Data visualization —ggplot (R), Adobe Creative Suite	Collaborative research
Computing —MacOS, Windows, LaTeX, Microsoft Office Suite	Creative problem solving
	Adaptability & resourcefulness

LEADERSHIP

Mentor—Haskell Environmental Research Studies Summer Institute, Haskell Indian Nations University & the University of Kansas

Summers 2022, 2021, 2020

- Mentored Native American, Alaska Native, and Native Hawaiian undergraduate students in STEM research methods resulting in 1 mentee receiving a National Science Foundation Graduate Research Fellowship
 - Received training in cultural competency, equity and inclusion, and traditional ecological knowledge (TEK)
 - Developed quantitative methods toolkit and assisted in training on mixed-methods approaches
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B.D. Geography, Honors , University of Kansas	Summer 2022
M.S., Geography, Honors , University of Kansas	Spring 2018
M.U.P., Sustainable Land Use Planning , University of Kansas	Spring 2018
B.S., Geographic Information Science, English minor, Summa cum laude , Texas State University	Spring 2014
Study Abroad, Irish Literature and Travel Writing , Cork, Ireland	Summer 2013
Cosmetology Degree , Xenon International Academy	Spring 2003

PUBLICATIONS

Wesley, E.J., Brunsell, N.A., Saint Onge, J.M., Rahn, D.A., Kane, N.J., & Kennedy, K. (**under review**). Neighborhood effects on acute pediatric asthma: Race, greenspace, and PM_{2.5}.

Wesley, E. J., & Brunsell, N. A. (2019). Greenspace pattern and the surface urban heat island: A biophysically-based approach to investigating the effects of urban landscape configuration. Remote Sensing, 11(19), 2322.