

Stephen Clyde Sanders

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Education

M.A. in Geography • *University at Buffalo* • Class of 2025

- Concentration in Urban and Regional Analysis

A.S. with Distinction in Geography • *Monroe Community College* • Class of 2023

- Certificate with Distinction in Geospatial Information Science and Technology (GIST)

B.S. in Philosophy, minor in Anthropology • *SUNY Brockport* • Class of 2018

Experience

Research Analyst • *Market Insights, Inc.* • August 7, 2023 – March 10, 2025

- Conducted 10+ market assessments, segmentation analyses, and member base evaluations for credit unions and regional banks (\$200M–\$3B AUM), delivering data-driven insights that informed growth strategies.
- Built automated R and Python workflows and a custom command-line application for market-level deposit analysis, reducing turnaround times by days and improving competitive benchmarking.
- Produced high-quality visualizations, maps, and reports (QGIS, R, Python, Excel, Word, PowerPoint) that supported consultants and clients in strategic decision-making.

GIS Intern • *City of Traverse City, Michigan* • February 9, 2023 – May 19, 2023

- Performed quality assurance and control on the Street Centerline master layer in relation to parcel, city right of way, and other datasets, during which 650+ issues were identified and inventoried.
- Authored a custom Python GIS script using ArcPy to automate spatial analysis of road attribution issues, improving efficiency and accuracy in municipal GIS workflows.
- Final Report: <https://drive.google.com/file/d/1RPAf0BpJdvzI6yw3eqa8b-xHik30dXaZ/view>

Selected Projects

A Mixed-Effects Spatial Analysis of Violent Crime in Buffalo, NY: Intersections of Socioeconomic Inequality and Police Surveillance

Spring 2025

- Conducted a spatial analysis of violent crime in Buffalo (2010–2023) using a Generalized Linear Mixed Model (GLMM) to identify socioeconomic determinants of crime risk.
- Found strong links between higher income/education and lower violent crime, while highlighting unexplained variation in historically disadvantaged neighborhoods, informing policy and surveillance coverage gaps.

Live Report: <https://stephensanders.me/GE0559-final-project/>

Mapping the Margins: A Block Group-Level Analysis of Unexplained Economic Distress in New York's Southern Tier (2009 - 2023)

Fall 2024 – Spring 2025

- Applied the Appalachian Regional Commission's Distressed Areas Classification System at the block group level across New York's 14-county Southern Tier to analyze localized socioeconomic vulnerability.
- Identified unemployment, urban development, and population density as key predictors of distress, while demonstrating the limitations of county-level classifications and the need for fine-scaled, spatially targeted policy.

Live Report: <https://stephensanders.me/GEO631-project/>

The Role of the Treaty Ports in the Emergence of China as a Global Economic Power

Spring 2024 – Spring 2025

- Researched the historical geography of China's treaty port system, tracing its evolution from coercive diplomacy and unequal treaties to its role in shaping China's integration into global trade.
- Argued that infrastructural and institutional legacies of the treaty port era (railways, port development, and global transport networks) catalyzed China's later economic rise and geopolitical influence.

Link: <https://docs.google.com/document/d/17kMH3xLRN9dvMn2koGjefaFD96rqPW04LDXFxst0ljU/>

Tweet Keyword Mapper

April 2023 – December 2023

- Search Twitter for Tweets containing a particular keyword or read Tweet data from a CSV/XLSX file, then write results to a file and/or map the results using ArcGIS Pro or GeoPandas.

Repository: <https://github.com/complxalgorithm/TweetKeywordMapper>

Relevant Coursework

University at Buffalo:

- Univariate/Multivariate Statistics (R)
- Spatial Data Science (R)
- GIS and Machine Learning (Python)
- GIS and Environmental Modeling
- Dynamic Modeling of Human and Environmental Systems
- Transportation
- Environmental Governance

Skills

Languages: R, Python, SQL, Bash, HTML, CSS/SCSS

Libraries: tidyverse, tidycensus, ipumsr, sf, stats, terra, leaflet, mapview
pandas, geopandas, arcpy, scikit-learn, geopy, numpy, plotnine

Software: ArcGIS Pro, QGIS, Microsoft Office, Git (GitHub), RStudio, Quarto, Jupyter, Survey123

Domains: Market Research, Demographics, Regional Analysis, Segmentation, Regression Analysis, Spatial Analysis, Crime Analysis, Remote Sensing, Cartography, Scripting