AYANDA M. MASILELA, PhD

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Employment

SEPTEMBER 2024 - PRESENT
Instructor | UW Continuum College Certificate in GIS Program: Seattle WA
Course: *Principles of Cartography and Thematic Design.* Training continuing education students on best practices and design principles in cartography and thematic mapping. Live demonstrations in ArcGIS Pro, coaching students on data management, geoprocessing, and representation.

JANUARY 2018 – JUNE 2024
Research Consultant | Center for Social Science Computation and Research: Seattle, WA
Conducted on-demand capacity building for students and faculty seeking research design, data acquisition, computation, and data analysis assistance. Designed technical trainings on ArcGIS Pro and Desktop, QGIS, Tableau, and SPSS. Created stand-alone multimedia educational materials that are now part of the department's routine curriculum.

JUNE – SEPTEMBER 2016, MARCH 2018 – FEBRUARY 2019, MARCH 2021 – JUNE 2022
Research Assistant | UW Department of Geography: Seattle, WA
Developed and standardized primary qualitative historical data spanning five decades into tabular and GIS-compliant formats. These datasets were presented as part of an appeal for NSF funding (awarded in 2021). This project has since grown into a web-based mapping publication that will be made available to the public at the project's conclusion.

SEPTEMBER 2015 – MARCH 2018
Teaching Assistant | UW Department of Geography: Seattle, WA
Courses: *Geographic Information Systems Workshop; GIS and Mapping*; *GIS and Spatial Analysis; Digital Geographies*; *Geography of Cities*; conferred *Outstanding Teaching Assistant Award (2017).* Evaluated student performance and derived tailored interventions for educational support.

Education

SEPTEMBER 2014 – JUNE 2024
University of Washington Department of Geography: Seattle, WA
- Doctorate in Geography; Certificate in Gender, Women, and Sexuality Studies, *summa cum laude*
- Dissertation: *Leisures of Responsibility: Spatializing Care and Wellness in Martial Arts Practice*
- Howard Martin Research Grant (2017); Joff Hanauer Endowment for Excellence in Western Civilization Graduate Fellowship (2017-2018); Graduate Minority Achievement Program Doctoral Fellowship (2014-2015)

AUGUST 2012 - AUGUST 2014
Virginia Tech Department of Geography: Blacksburg, VA
- Master of Science in Geography, *summa cum laude*
- Thesis: *Discerning Neighborhood Characteristics as Contributing Factors to Infant Mortality in Rural Northern Plains Communities*
- Research Technician: Spatial epidemiological analysis on Lyme Disease infections and land cover conditions in Southwestern Virginia using ArcGIS Desktop 10.2

AUGUST 2006 - DECEMBER 2010
Indiana University of Pennsylvania Department of Geography: Indiana, PA
- Bachelor of Arts in Geography: GIS and Cartography; Second Major in Asian Studies, *magna cum laude*
- Ronald E. McNair Scholars Program; Robert E. Cook Honors College

Research and Project Experience

MARCH 2018 - PRESENT
Online Learning Platform

- Produced written instructional content for self-paced learning in ArcGIS, QGIS, Tableau, SPSS Syntax and GUI, and Atlas.ti
- Edited and published instructional YouTube videos for ArcGIS, SPSS, and Atlas.ti
- Materials are currently in use as part of the standard curriculum in UW Geography Department classes

COMPLETED JUNE 2024
Doctoral Dissertation

- Qualitative health geographies: developed an analysis of how concrete circumstances, especially caring social relationships, influence beliefs about health in body-centric leisure communities.
- Primary Qualitative Data Collection: Semi-structured Interviews; Landscape Characteristic Analysis; Interview Transcription
- Qualitative Data Analysis: Thematic Analysis; Narrative Analysis; Grounded Theory; Atlas.ti

COMPLETED JUNE 2022
Research Assistantship

- NSF Funded Project Title: *Shifting Spatialities of LGBTQ Life*
- Historical Data Collection: Primary Data Digitization and Development; Aerial Photo Analysis; Ground Truthing
- Geographic Information Systems Integration: Google API Geocoding; Cartography; Data Verification; Spatial Statistics in QGIS integrating US Census Bureau TIGER/Line Geodatabases
- Locational data cleaning and validation using aerial photography from DigitalGlobe and Google Earth Pro
- Principal Investigators: Michael Brown, PhD, Lawrence Knopp, PhD, and Bo Zhang, PhD at the University of Washington Department of Geography

COMPLETED SEPTEMBER 2019
GIS Consultation (Private Contract)

- Geospatial analysis and cartography for Puget Sound SAGE. Evaluated the neighborhood impact of Seattle's Link Light Rail development on lower-income and racially diverse neighborhoods at elevated risk of redevelopment.
- Designed and published six maps displaying various risk factors for redevelopment, which were presented to the client's stakeholders at organizational meetings.

COMPLETED AUGUST 2014
Master's Thesis

- A comparative analysis of maternal and infant health outcomes and healthcare utilization patterns between predominantly Indigenous American counties and majority counties in the Northern Plains, paying close attention to histories of medical abuses in these regions.
- Deciphered influences on maternal and infant health outcomes, conducting a full workup through Descriptive Statistics, Simple Regression, Stepwise Regression Analysis, ANOVA, and T-Tests.
- Analyzed healthcare utilization patterns using geospatial methods, including network analysis, buffer analysis, and near distance using ArcGIS Desktop.

Software and Coding

GEOGRAPHIC INFORMATION SYSTEMS: ArcGIS Pro and Desktop; ArcGIS Online; Esri Storymaps; QGIS; Carto; Fulcrum
CODING LANGUAGES: Python (basic); SQL (basic); HTML (intermediate); CSS (intermediate)
QUANTITATIVE DATA ANALYSIS: SPSS GUI and Syntax; Tableau
QUALITATIVE DATA ANALYSIS: Atlas.ti (7, 8, 9, 22-24)