

• Visionary leader with an interest in using GIS and environmental science and planning to address issues such as conservation, disaster management, climate change, & water resources • 10 years of operations and management experience • A track record of intellectual rigor and academic achievement

EDUCATION

University of Pennsylvania

Master of Environmental Studies, Resilience and Adaptation, May 2019
Certificate Geographic Information Systems (GIS) and Spatial Analysis, May 2019

North Carolina State University

Bachelor of Landscape Architecture, May 2005
Recipient of the NCSU Landscape Architecture Book Award

PROFESSIONAL EXPERIENCE

Project Lead, Assistant Center Lead | May 2019 - Present

NASA | SSAI, DEVELOP Contract

- Leading DEVELOP team (of up to eight members) efforts and coordinating county and national-level stakeholder demands within NASA's applied sciences division
- Addressing environmental and public policy issues through interdisciplinary disasters and water resources research projects, such as Howard County Maryland OEM Flood Modeling (FLUME)
- Designing research & integrating information into applications for mapping and forecasting
- Analyzing and interpreting data, developing data visualizations, and presenting scientific findings, such as for the USDA-FS Gila National Forest Watershed Recovery Analysis

Environmental Science Instructor | Jan 2019 - May 2019

University of Pennsylvania

- Taught recitations for 200 students and developed materials for a wide variety of environmental science subject matter

Director | Feb 2014 - Jun 2018

Studio | Bryan Hanes | Urban Design

- Managed operations and staff & scope, budgets, schedules and deliverables for complex projects
- Prepared environmental reports and land management plans

Manager | Jul 2012 - Feb 2014

Philadelphia Art Center

- Trained staff and taught a wide variety of audiences in unconventional teaching environments

Contractor | Oct 2012 - Oct 2013

East Coast Greenway Alliance

- Developed strategic interagency growth strategy
- Increased Mid-Atlantic user engagement by 30%

Co-founder | Jan 2010 - Dec 2013

Roots First Design, LLC

- Launched landscape design/build firm and managed staff, subcontractors, and volunteer groups of up to 30 individuals

PROJECTS

- **FLuME:** Statistical machine learning model that estimates streamflow and increases the Office of Emergency Management's (OEM) emergency warning time using Python and PyTorch packages & USGS stream gauge and NASA Earth observation data
- **Climate Change Adaptation on Yap, Micronesia, Independent study:** Spatial analysis of climate change impacts to subsistence agriculture on a small island developing nation using ArcGIS
- **Infrastructure Vulnerability to Storm Events, Master's thesis:** Hazard assessment and exploration of appropriate spatial analysis methods to track water and electric power infrastructure failure in Puerto Rico using ArcGIS and R

SOFTWARE EXPERTISE

Adobe Creative Suite
ArcGIS
Google Earth Engine
MS Office Suite
R
Python

ADDITIONAL TRAINING

- NASA ARSET disasters and remote sensing workshops (in GEE and QGIS)
- The Work of Edward Tufte: Presenting Data and Information
- Software Carpentry: Version Control with GIT and Python Programming
- Master Class with Urban Spatial Analytics, University of Pennsylvania: R programming, sponsored by Socrata and The Penn Institute for Urban Research

PUBLICATIONS & CONFERENCES

- 2018 *International Small Islands Studies Association*, Waddenacademie, "Spatial Analysis of Climate Change Adaptation on Yap, Micronesia"
- Context Magazine, *American Institute of Architecture*, "Green Infrastructure in Philadelphia: The Reading Viaduct Rail Park."

COMMUNITY INVOLVEMENT

- ArcGIS mapping volunteer, Puerto Rico Disaster Relief Map-a-thon
- Co-founder, Philadelphia Instructional Spanish Cooperative (PISCo)
- Group leader, Ragnar Relays (multiple events)
- Safety Coordinator, Back-On-My-Feet, 20-in-24 annual running event
- Naturalist Docent, Bowman's Hill Wildflower Preserve
- Urban Tree Connection, Environmental Educator