

Denise A. Piechnik, Ph.D., C.E.

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Summary

- Project manager with demonstrated success leading cross-functional and cross-disciplinary collaborative research, as well as collecting, statistically analyzing, interpreting and reporting results in 2 technical reports and 6 scientific journals.
- Strong oral and written communication skills as a technical writer of project reports and research articles, as evidenced by 2 technical reports for USDA, and 9 journal publications including publications in Landscape Ecology.
- Adept at managing data science pipelines and modeling using R programming, Python, Arc Geographic Information Systems geospatial tools to analyze stream, forest, biodiversity and land-use data, as described in 11 publications and abstracts.

Work Experience

Environmental Data Scientist and Data Analyst Skills

Gained as an Associate Professor of Biology at the University of Pittsburgh at Bradford in Bradford PA, and as a Postdoctoral Scholar and Research Associate at the Pennsylvania State University, in University Park PA

- Ability to efficiently organize and implement projects that assess natural resources and conservation strategies, as well as data acquisition, spatial analysis and synthesis, resulting in 3 technical reports, a Landscape Ecology publication, detailed maps and monitoring plans during research with the United States Department of Agriculture.
- Skilled in performing computationally intensive analyses, as evidenced by geospatial modeling using ArcGIS hydrogeologic tool set to calculate flow path characteristics under multiple data resolutions.
- Effective in independently driving results, meeting deadlines, and ensuring meticulous attention to detail, as well as navigating dynamic matrixed organization with shifting priorities, leading to collaborative and independent contributions of 8 journal publications including Nature Ecology and Evolution, and 2 technical reports.

Consulting, Project Management, and Cross-functional Collaboration Expertise

Gained as Gained as a Associate Professor of Biology at the University of Pittsburgh at Bradford in Bradford PA, and as a Research Associate and Postdoctoral Scholar at the Pennsylvania State University (PSIEE), in University Park PA at University of Pittsburgh

- Research and analysis expertise in GIS and geospatial analysis using ARCGIS tools in spatial analysis, hydrologic analysis, digitizing, field data collection and mapping, and map making as evidenced by results and maps published in Landscape Ecology, and technical reports.
- Expertise in performing nonparametric and parametric statistics in ANOVA, mixed model, simple and logistic regression, multivariate statistics as MANOVA, PCA, RDA, CCA, and descriptive statistics such as diversity analyses, simulations and permutation analysis, as evidenced by 5 publications and 1 technical report.

Education

Ph.D. in Ecology, with a focus on Conservation Biology. Experimental analysis of spatial relationships in food-webs during community assembly

Skill List

R-Programming
Python Programming
ESRI ArcGIS
Git and GitHub
Data Analysis & Synthesis

Presentation Skills
Experimental Design
Technical Writing
Project Management
Research

Microsoft Office/Libra Office
Google Workspace
Cross-functional collaboration
Cross-disciplinary collaboration
Multivariate Statistics

Affiliations, Awards & Hobbies

- Member of Ecological Society of America, Entomological Society of America
- Data Fluency and Analysis: Power BI Data Visualization, SQL Tableau, Probability Statistics, Python Data Analysis, Data Mining in R. LinkedIn Learning
- Python Basics, Data Science Math: Algebra and Differential Calculus Essential Linear Algebra, Relational Database Design, Emotional Intelligence. Coursera
- GIS Training Penn State University ORSSIR Workshops: GIS Basic Skills, ArcGIS/II Training, LiDAR, PAMAP products and DEMs
- Japanese Aiki-jujutsu, playing the violin, fermenting food and beverages

Publications