

Maedeh Yazdani Arani

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PROFESSIONAL SUMMARY

PhD candidate in Civil and Environmental Engineering specializing in water quality, data analytics, and risk modeling. Experienced in developing national-scale water quality databases, evaluating contaminants under the SDWA (EPA), and applying geospatial and statistical tools (R, ArcGIS Pro) to support regulatory and infrastructure decision-making. Skilled in translating complex environmental data into actionable insights for public health protection and policy improvement. Seeking opportunities in environmental consulting, data-driven infrastructure planning, and regulatory compliance.

TECHNICAL SKILLS

Software: R, ArcGIS Pro, SPSS, LISREL, Adobe Creative Suite (Photoshop), Microsoft Office (Excel, Word, PowerPoint, Visio, Outlook, Teams), Python (Basic)

Analytical Skills: Water Quality Analysis, Contaminant Risk Modeling, Geospatial Analytics, Data Visualization, Regulatory Analysis

Certifications: ENV SP, IRB, ArcGIS Pro (ESRI), ICPSR Quantitative Methods, Responsible Conduct of Research, Introduction to social marketing for public health

PROFESSIONAL EXPERIENCE

Graduate Research Assistant – Drinking Water Risk Evaluation & Regulatory Analysis

University of South Florida | 2023–Present

- Led interdisciplinary project on drinking water integrating data science, policy, and public health to evaluate risk and regulatory effectiveness.
- Developed large-scale water quality database covering +30,000 community water systems and +60 contaminants.
- Developed Relative Health Indicator (RHI) metric to quantify health risk reduction under varying regulatory thresholds.
- Visualized contaminant distribution and geo spatial analysis using R and ArcGIS Pro to inform decision-makers.

Graduate Research Assistant – PFAS Regulatory and Risk Analysis

University of South Florida | 2023–2024

- Evaluated PFAS regulatory standards and toxicological thresholds (NOAEL, LOAEL, UF) across multiple states.
- Supported creation of a national PFAS database integrating exposure and toxicity data.
- Conducted comparative assessment of EPA, federal and state MCL/MCLG frameworks.

Graduate & Teaching Assistant – Environmental Engineering Department

University of South Florida | 2023–2024

- Assisted community-based research projects addressing environmental education and water safety.
 - Supported undergraduate labs in Environmental Systems Engineering and Statistics, guiding data analysis and GIS mapping.
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LEADERSHIP & OUTREACH

President, Florida Water Environment Association – USF Chapter (Apr 2025–Present)

Vice President, American Water Works Association – USF Chapter (Apr 2025–Present)

Event Coordinator, AWWA Region IV (Oct 2023–Apr 2025)

EDUCATION

Ph.D. in Environmental Engineering (Expected 2027) | GPA: 3.61

Focus: Data modeling, Risk assessment, Statistics, Geospatial analysis, Data visualization (R, ArcGIS Pro), Policy evaluation, Community engagement

M.Sc. in Environmental Engineering – Water Crisis Education and Outreach | GPA: 4.00

Focus: Water resource management, Community education, Survey design & impact assessment, Statistical analysis (SPSS), SEM (LISREL), Women & Youth Engagement in Water Awareness Programs

B.Sc. in Natural Resources Engineering – Environmental | GPA: 3.41