



Exponent®
Engineering & Scientific Consulting

Reza Goljani, Ph.D.

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Professional Profile

Dr. Reza Goljani Goljani is a quantitative ecologist in Exponent's Ecological and Biological Sciences practice. He applies statistical modeling, spatial analysis, GIS, and ecological data synthesis to evaluate species distributions, habitat relationships, biodiversity change, and environmental decision-making.

Dr. Goljani's works at the intersection of ecological field data, large environmental datasets, and quantitative modeling. He has developed and applied hierarchical species distribution and community models to understand how climate, land use, habitat structure, and survey design shape observed patterns of abundance, occupancy, and biodiversity. His experience includes modeling imperfect detection, integrating historical and contemporary datasets, and building reproducible workflows in R, GIS, and remote sensing environments.

Before joining Exponent, Dr. Goljani was a postdoctoral scholar at the University of California, Santa Cruz, where his research supported conservation decision-making for California bird communities and alpine species. His projects included reconstructing historical baselines, evaluating range and habitat shifts, identifying species-habitat relationships across spatial scales, and developing decision-support tools for biodiversity monitoring and management.

At Exponent, Dr. Goljani brings a quantitative ecology perspective to ecological risk assessment, natural resource damage assessment, environmental impact analysis, restoration and monitoring, threatened and endangered species questions, and environmental data analytics. He helps project teams transform complex ecological and geospatial datasets into transparent, defensible analyses, maps, and decision-support products for ecological risk assessment, NRDA, environmental impact analysis, restoration planning, and regulatory decision-making.

Academic Credentials & Professional Honors

Ph.D., Biological Science, University of South Dakota, 2023

M.S., Wildlife Science, New Mexico State University, 2017

M.S., Natural Resources Engineering, Azad University, 2009

B.S., Natural Resources Engineering, University of Tehran, 2005

UCSC Chancellor's Postdoctoral Fellowship , University of California, Santa Cruz, 2024

David H. Smith Conservation Research Fellowship, Society for Conservation Biology and Cedar Tree Foundation, Washington, DC, 2024

Distinguished Ph.D. Dissertation Award, University of South Dakota, 2023

Professional Affiliations

Ecological Society of America

IALE–North America, North American Regional Chapter of the International Association for Landscape Ecology

Project Experience

Quantitative Ecological Modeling

Developed Bayesian and hierarchical models to estimate species abundance, occupancy, distribution, and biodiversity patterns while accounting for imperfect detection, survey design, and multi-scale habitat relationships.

Species Distribution and Habitat Analysis

Analyzed historical and contemporary ecological datasets to evaluate changes in species distributions, habitat associations, and environmental drivers of biodiversity change.

Geospatial and Environmental Data Integration

Built reproducible workflows that combine field observations, climate data, remote sensing products, topography, land cover, fire history, and other landscape covariates for ecological assessment and mapping.

Biodiversity Monitoring and Decision Support

Supported conservation partners by translating monitoring data into maps, model outputs, and summaries relevant to management decisions for bird communities and sensitive species.

Ecological Data QA/QC and Synthesis

Worked with large, messy ecological datasets, including point-count surveys, automated recording unit data, museum records, citizen science records, and spatial environmental layers, with an emphasis on transparent data processing and defensible interpretation.