

Jacob Gareis

jacobgareis22@gmail.com — 763-482-1992

Education

Virginia Tech

2025–Present

Ph.D. in Statistics, Jean P. Gibbons Fellow

Winona State University

2022–2025

B.S. in Statistics, Minors: Data Science, Mathematics

GPA of 3.8, Distinguished Graduate

Experience

Researcher, Winona State Biology Department

September 2023 – Present

- Applied statistical and machine learning techniques to identify environmental drivers of microbial community composition across riverine ecosystems.
- Analyzed watershed land-use data to quantify how landscape patterns shape microbial community composition and function.
- Identified key microbial taxa as bioindicators of water quality and ecosystem health.

Solutions Analyst, Fastenal

August 2024 – May 2025

- Developed an LLM + ML pipeline to automatically fulfill data pulls based on ticketing system requests.
- Developed a stock–restock optimization algorithm to improve inventory management processes.
- Built automation scripts to streamline routine data pull processes.

Statistical Consultant, Semcac

August 2023 – December 2024

- Surveyed community members across seven southwest Minnesota counties to assess local needs and priorities.
- Evaluated current coverage and effectiveness of Semcac’s needs-based programs.
- Developed a three-year community action plan to guide organizational strategy and resource allocation.

Summer Researcher, Southern Methodist University

Summer 2024

- Worked in collaboration with DHS and North Texas law enforcement to develop geospatial analysis software using satellite imagery and OpenStreetMap to refine search areas in agricultural labor trafficking.
- Shared the software to researchers and law enforcement at Southern Methodist University and the University of Houston.
- Conducted a literature review and data analysis to identify key push and pull factors influencing international trafficking.

Data Analyst Intern, Marine Credit Union

January 2024 – June 2024

- Created a real-time next-best-action system to recommend optimal support, products, or opportunities to members in branch.
- Developed predictive models to estimate the probability of default on loan payments.
- Generated internal reports for financial and human resource departments.

IT Analyst Intern, Marine Credit Union

August 2023 – December 2023

- Implemented and tested internal password security protocols using hashing algorithms.
- Served on the technology committee responsible for evaluating and replacing physical security systems.

Peer-Reviewed Publications

Martinez, O., Bergen, S., & Gareis, J. (2024). *Comparison of Yamuna (India) and Mississippi River (United States of America) bacterial communities reveals greater diversity below the Yamunotri Glacier.*

Gareis, J., Martinez, O., Bergen, S., Blumentritt, D., & Olsen, C. (2025). *Bacterial community fingerprints as indicators of watershed land use.* (Manuscript submitted for publication, awaiting review)

Cristadoro, K., Hooks, T., & Gareis, J. (2026). *Personality Trait–Driven Vulnerabilities to Anxiety and Social Media Addiction in Adolescent Females.* (Manuscript submitted for publication, awaiting review)