KRISTINA MCINTIRE

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PROFESSIONAL SUMMARY

Ecologist and data scientist with 13+ years of experience in statistical modeling, infectious disease ecology, and data analysis. Skilled in Python, R, SQL, and SAS with a strong foundation in GLMs, SEMs, and machine learning. Proven success leading research projects, extracting insights from complex datasets, and presenting findings to diverse stakeholders.

TECHNICAL SKILLS

Languages: Python, R, SQL, SAS
Tools: pandas, scikit-learn, matplotlib, ggplot2, tidyverse, seaborn, Git, RMarkdown, RStudio
Modeling: GLM/GLMM, SEM, PCA, Random Forest, GBM, time series, survival analysis
Other: Data wrangling, visualization, version control, reproducible workflows

EXPERIENCE

Quantitative Research Analyst | Univ. of Hawai'i – Hilo | Aug 2024 – Present

- Built SEMs and ML models (RF, GBM) to optimize mosquito control.
- Developed occupancy models and time-series analyses to guide field sampling.
- Managed reproducible workflows and presented results to stakeholders.

Postdoctoral Research Fellow | Univ. of Michigan | Aug 2021 – Aug 2024

- Led transgenerational virulence project; applied GLM, GAM, and survival models.
- Built Python-based RF models with geographic mapping of disease risk.
- Created interactive dashboards and advised peers on statistical analysis.

Graduate Researcher | Illinois State Univ. | Aug 2014 – Dec 2020

- Conducted SEM, PCA, and regression analyses on infection and invasion dynamics.
- Built elk disease management models; visualized data for scientific outreach.

SELECTED PROJECTS

• Mosquito Control Optimization – Used SEM + ensemble ML to optimize intervention strategies.
• Disease Mapping – RF model + geospatial mapping to identify outbreak hotspots.
• Transgenerational Epidemiology – Led cross-institution collaboration modeling maternal pathogen effects on disease spread using GLMs and survival analysis.

EDUCATION

Ph.D., Biological Sciences, Illinois State Univ., 2020
B.S., Biological Sciences, Illinois State Univ., 2014

CERTIFICATIONS

IBM Data Science Specialization (incl. ML, SQL, Python, Visualization, Data Analysis)

SELECTED PUBLICATIONS

McIntire et al. 2025. Transgenerational virulence. Ecology
Dziuba, McIntire et al. 2024. Microsporidian coinfection. mBio
McIntire & Juliano 2021. Dilution effects in parasitism. Ecology
Full list: krismcintire.com