Evan Gorstein

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Education

Ph.D. Statistics, University of Wisconsin–Madison   Expected 2026
Adviser: Claudia Solís-Lemus

M.S. Statistics, University of Wisconsin–Madison   2023

B.S. Mathematics, University of Chicago   2019
Phi Beta Kappa

Research interests

Phylogenetics, deep learning, generative models, species networks, protein evolution

Awards and scholarships

Graduate Travel Award (UW–Madison Plant Pathology Department)	2024
Phi Beta Kappa (University of Chicago)	2019
University Scholar Award (University of Chicago)	2015-19
University Dean's List (University of Chicago)	2015-19

Papers in review

Ancestral Sequences Cannot be Accurately Reconstructed via Interpolation in a Variational Autoencoder's Latent Space. *Evan Gorstein, Mengze Tang, Hailey Bruzzone, Claudia Solís-Lemus.* bioRxiv: 2025.11.19.689264

Combined Effects of Methyl Bromide and Soil Ammendments on Soil Bacterial and Fungal Communities in Turfgrass. *Salma Mikhtar, Tianyi Xu, Evan Gorstein, Claudia Solís-Lemus, Ming Yi Chou, Paul Koch.*

Publications

2025

HighDimMixedModels.jl: Robust high-dimensional mixed-effects models across omics data. *Evan Gorstein, Rosa Aghdam, Claudia Solís-Lemus.* PLOS Computational Biology. doi: 10.1371/journal.pcbi.1012143

2020

Modeling based response guided therapy in subjects with recent hepatitis C infection. *Evan Gorstein, Marianne Martinello, Alexander Churkin, Swikriti Dasgupta, Kevin Walsh, Tanya L. Applegate, David Yardeni, Ohad Etzion, Susan L. Uprichard, Danny Barash, Scott J. Cotler, Gail V. Matthews, Harel Dahari.* Antiviral Research. doi: 10.1016/j.antiviral.2020.104862

Modeling-Based Response-Guided Glecaprevir-Pibrentasvir Therapy for Chronic Hepatitis C to Identify Patients for Ultrashort Treatment Duration. *Swikriti Dasgupta, Michio Imamura, <u>Evan Gorstein</u>, Takashi Nakahara, Masataka Tsuge, Alexander Churkin, David Yardeni, Ohad Etzion, Susan L Uprichard, Danny Barash, Scott J Cotler, Harel Dahari, Kazuaki Chayama*. Journal of Infections Diseases. doi: 10.1093/infdis/jiaa219

Talks

Ancestral Sequence Reconstruction with VAEs

UW–Madison Evolution Seminar   Madison, December 2025

HighDimMixedModels.jl: Robust high-dimensional mixed-effects models across omics data

Joint Statistical Meeting   Nashville, August 2025
UW–Madison Statistics Student Seminar   Madison, April 2024
JuliaCon Poster   Boston, July 2023

Changes in a golf course phytobiome resulting from methyl bromide fumigation

UW-Madison Plant Pathology Friday @4 Seminar   Madison, March 2023

Research experience

Solís-Lemus Lab in Wisconsin Institute for Discovery

Mentor: Claudia Solís-Lemus   September 2022 – Present
Benchmarking statistical performance of new methods for applications in omics and phylogenetics, developing open source software, authoring papers

Sports Analytics Research Project

Mentor: Sameer Deshpande   August 2021 – August 2022
Developed a hierarchical Bayesian model of contribution of individual NHL hockey player to their teams' shots and fit to all hockey shifts during a season.

Program for Experimental and Theoretical Modeling at Loyola University Medical Center

Mentor: Harel Dahari   August 2019 – March 2020
Performed statistical analysis for cohort studies modeling decline of Hepatitis C virus (HCV) upon treatment to identify patients for shorter treatment.

University of Chicago Summer Math REU

Mentor: Daniel Campos Salas   June 2016 - August 2016
Authored expository paper exploring connection between simple random walks and the discrete Dirichlet problem.

Teaching experience

Teaching assistant, UW-Madison

STAT 309: Introduction to Probability   Spring 2021, Fall 2021, Spring 2022
STAT 371: Introductory Applied Statistics for the Life Sciences   Fall 2020

Teaching assistant, University of Chicago

MATH 15100: Calculus I	Fall 2016
MATH 15200: Calculus II	Winter 2017

Industry and consulting experience

UW-Madison College of Agriculture & Life Sciences

Statistical Consultant   Fall 2022–Fall 2023

Provided one-on-one statistical consulting (data analysis, statistical programming, and experimental design) for staff and graduate students in the biological sciences at UW-Madison

John Deere Factory Automation Team

Data Science & Anayltics Intern   Summer 2022

Assisted with various data engineering projects related to tractor factory and sales data

Skills

Programming: R, Julia, Python, Stan
Software: Git, LaTeX
Languages: English (native), Hebrew (advanced), Spanish (beginner), Yiddish (beginner)

Service and outreach

Statistics Graduate Student Association   November 2020 – May 2023

Student Outreach Chair

Helped out with planning and manning a statistics station for kids at UW-Madison Science Expeditions weekend