

DANIEL HINTZ

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[LinkedIn](#) ♦ [GitHub](#) ♦ [Website](#)

EDUCATION

University of Wyoming

August 2020 – August 2024

MS in Statistics

Thesis Title: An Exploration of Information Loss in Transformer Embedding Spaces for Enhancing Predictive AI in Genomics

MS in Economics

Thesis Title: How Do Renewable Portfolio Standards Impact State-Level Carbon Emissions by Sector?

WORK EXPERIENCE

Biostatistician at Well Oiled Machine, LLC

Laramie, WY

20 hours weekly - on Contract

September 2024 – Present

- Project-based gig work in applying biostatistics, AI/ML, data visualization, and querying SQL databases

Intern Biostatistician at Guardant Health

Palo Alto, CA

Full-time

June 2024 – September 2024

- Developed a Super Learner from a library of Bayesian Joint Models for longitudinal time-to-event data to improve the prediction of cancer patients' Overall Survival and Progression-Free Survival. The Super Learner delivered **dynamic, patient-specific predictions, considerably improved predictive accuracy** and **ultimately advanced patient monitoring efforts**.

Graduate Researcher at UWYO's Advanced Research Computing Center (ARCC)

Laramie, Wyoming

Part-time

July 2023 – May 2024

- Collaborated with **Argonne National Labs** to develop a methodology for assessing genomic embeddings as part of a project aimed at creating an Inverse Reinforcement Learning (IRL) pipeline to predict the mutation trajectory of colorectal cancer.

Intern Data Scientist at Western Ecosystems Technologies (WEST)

Laramie, Wyoming

Full-time

May 2023 – August 2023

- Generated time series forecasts to predict Jackson Lake's elevation levels, which informed Colter Bay Marina's operations, infrastructure updates, and risk exposure assessments for the US National Park Service.

Intern Bioinformatician at Wyoming Public Health Lab

Cheyenne, Wyoming

Full-time

May 2022 – August 2022

- Built Docker containers for Bioinformatic Pipelines

TEACHING & PRESENTATIONS

Nextflow Workshop

Laramie, Wyoming

half-day, co-lead

April 12, 2022

- Workshop title: 'Building Parallelizable Pipelines for Scientific Computing'

Devtools for Scientific Computing Workshop

Laramie, Wyoming

half-day, lead

November 16, 2023

- Workshop title: "Devtools for Scientific Computing, A Introduction to Bash, Conda, Git and VS-code"

An advanced Introduction to R

half-day, lead

November 16, 2023

March 25, 2024

- Workshop title: "An Advanced Introduction to R, A R Ladies Workshop"

GRANTS

COVID-Statistical Data Analysis and Data Science Support for the State of Wyoming

2022

- \$660k in Funding with Dr. Tim Robinson as PI and myself under Key Personal

AWARDS

The American Statistical Association's Maurice Davies Award

2024

- Awardees demonstrated excellence in statistics through academics, teaching or community service.

SKILLS

Python (Intermediate proficiency): Excellent at data wrangling, data visualization as well as data structures (lists, tuples, dictionaries, sets). Intermediate experience with functional programming, object-oriented programming principles, metaprogramming, concurrency, and unit testing. Strong familiarity with the pandas, NumPy, Matplotlib, Plotly and the PyTorch libraries.

R (Advanced proficiency): Advanced knowledge of vectored functions, package development, Quarto presentations, Rmarkdown, ggplot2, plotly, multi-core processing, shiny, S3/S4 OOP, data wrangling, data visualization, and packages tailored for advanced statistical modelling including: stats, MASS, lme4, car, nlme, lmerTest, VCA, mixlm, rstan, rjags, and others.

Other Coding Languages: Moderate proficiency with SAS, Jags, Bash/UNIX, SLURM, git, conda and SQL (PostgreSQL, pgAdmin), nextflow, Stan, Portable Batch System (PBS), Docker and C/ C++, Tableau, and Visual Basic.

Prediction and Inference: Bayesian/Frequentist Hierarchical Linear/Non-Linear modeling, Survival Analysis, Longitudinal Analysis, and Joint modelling, Design and Analysis of Experiments, Bayesian Statistics, Multivariate Statistics, General Linear Models, Geospatial Statistics Traditional ML (Random Forests, Support Vector Machines, etc.), and Transformer Models and Deep Learning (PyTorch)

REFERENCES

Dr. Tim Robinson

Professor
University of Wyoming
Dept. Mathematics & Statistics
tjrobin@uwyo.edu
(307) 761-5159

Dr. Robinson was my academic advisor for my Masters in Statistics from 2022 to 2024.

Dr. Chris Pretz

Senior Biostatistician
[Guardant Health](#)
cpretz@guardanthhealth.com
(720) 934-5532

Dr. Pretz was my supervisor for my internship at Guardant Health (June 2023 - September 2024).

Dr. Liudmila Sergeevna Mainzer

CEO
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Dr. Mainzer was my supervisor as a Graduate Researcher from her time as Director of the University of Wyoming's Advanced Research and Computing Center. Dr. Mainzer is also now my supervisor in my job at [Well Oiled Machine, LLC](#).