Andrew Hayden Morris

andrewmorris@mailbox.org · Personal Website · Github · LinkedIn

EDUCATION

PhD Biology, (2022) *University of Oregon*   Eugene, OR, USA

MS Soil Science, (2017) *The Pennsylvania State University*   State College, PA, USA

BS Plant Sciences, (2014) *Cornell University*   Ithaca, NY, USA

RELEVANT EXPERIENCE

Researcher in Big Data and Precision Medicine   Mar 2024 - Present
Postdoctoral Scholar, Centre for Precision Psychiatry, University of Oslo   Oslo, Norway

- Analyzed large-scale datasets from Norwegian health registries combining genetic data with electronic health records to model age of onset for disease across tens of thousands of subjects
- Developed clear visualizations and statistical models for individualized risk prediction
- Collaborated with domain experts in oncology, genetics, and epidemiology to define hypotheses and develop statistical analyses
- Supported the development of a precision medicine platform to be integrated into the Norwegian healthcare system

Researcher in Animal Microbiomes and Aquaculture Systems   Mar 2022 - Dec 2023
Postdoctoral scholar, Institute of Ecology and Evolution, University of Oregon   Eugene, OR, USA
Visiting scholar, Department of Biotechnology and Food Science, NTNU   Trondheim, Norway

- Analyzed aquaculture datasets investigating the impact of environmental factors (antibiotic treatment, stocking density) on fish health and growth outcomes
- Conducted comparative analysis of recirculating aquaculture systems between Oregon and Norwegian facilities, established data collection protocols for water quality and fish health monitoring
- Conducted meta-analysis of 50+ unstructured datasets from published reports on animal microbiomes and presented findings in *Nature Microbiology*
- Collaborated with international teams of biologists, aquaculture experts, and data scientists to translate research questions into analytical approaches

PhD Research Fellow   Aug 2017 - Mar 2022
Institute of Ecology and Evolution, University of Oregon   Eugene, OR, USA

- Analyzed environmental datasets from dozens of field sites across Brazil and Gabon, identifying patterns in soil characteristics and greenhouse gas emissions
- Developed statistical models integrating laboratory experiments with field observations
- Uncovered insights that contributed to $3 million USD in funding from the U.S. National Science Foundation
- Collaborated with interdisciplinary teams of ecologists, microbiologists, and soil scientists in Brazil, Gabon, and the US

MS Research Fellow   Aug 2015 - Jul 2017
Department of Ecosystem Science and Management, Penn State University   State College, PA, USA

- Collaborated with agricultural industry partners to design and implement experiments at research stations and on commercial farms
- Developed statistical models to understand the relationship between on-farm practices and environmental impacts through nutrient pollution and greenhouse gas emissions
- Presented data-driven recommendations to farmers, industry partners, and extension agents to facilitate informed decision making

TECHNICAL SKILLS

Statistical Analysis & Programming

- **R** - Expert level: statistical modeling, data manipulation, visualization (ggplot2) and package development
- **Python** - Intermediate: Proficient in data processing, statistical analysis and scripting
- **SQL** - Basic proficiency in queries, syntax and database concepts; extensive experience with equivalent data manipulation in R (dplyr)
- **Statistical Methods** - Extensive experience with regression modeling, mixed-effects models, multivariate analysis, and experimental design

Data Visualization & Communication

- **Visualization** - Advanced skills with ggplot2, creating publication-quality graphics and interactive plots
- **Data Storytelling** - Experienced in translating complex statistical findings for diverse audiences
- **Technical Writing** - Skilled in documenting analytical methods and presenting results in scientific publications

Data Management & Collaboration

- **Version Control** - Experienced with Git and GitHub for collaborative analysis projects
- **Cloud Platforms** - Experienced with high-performance computing environments (Slurm, Tjenester for Sensitive Data)
- **Unix/Bash** - Proficient in command-line tools and shell scripting for automation

LANGUAGES

English: Native speaker with excellent written and verbal communication

Norwegian: Completed formal A1 and A2 courses with structured textbook study through B1/B2. Daily practice in reading, writing, listening, and speaking.