

Christopher Hamm

Lead Data Scientist

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Summary

Lead Data Scientist with a strong research and experimental background with 10+ years experience using reproducible methods and rigorous analysis to generate unique insights and create value. Software Carpentry Foundation Trainer and Instructor for R and python.

Education

- 2012 **PhD**, *Michigan State University*, Entomology.
- 2012 **PhD**, *Michigan State University*, Ecology, Evolutionary Biology & Behavior.
- 2008 **MS**, *California State University, Fresno*, Biology.
With Distinction
- 2004 **BS**, *California State University, Fresno*, Biology.
Magna Cum Laude

Experience

2018–Present **Lead Data Scientist**, *Bayer - Decision Science*.
Naveen Singla, supervisor.

- **Technical Project Management:**
 - Supervised 30+ machine learning projects
 - Develop, promote, and distribute best practices curriculum for enterprise data scientists
 - Develop proprietary curriculum for company specific workflows
 - Created neural network forecasting models for supply chain
- **Mentorship & Training:**
 - Platinum Pinnacle Award for creating and implementing company-wide digital fluency curriculum
 - Organize, coordinate, mentor, and teach data fluency workshops
 - Coordinate 15 digital fluency trainers
- **Member:**
 - Data Science Center of Excellence
 - Model Governance Team
 - Data Management Team

2017–2018 **Data Scientist**, *Monsanto Company*.

Shawn L. Stricklin, supervisor.

- **Individual Contributor:**

- Developed and implemented a program to simulate the vegetable breeding pipeline
- Implemented predictive modeling to predict genotype sample submission frequency
- Created gradient boosted regression model to identify disease susceptible genotypes
- Provided *ad hoc* statistical support to 10 plant breeders
- Organized and coordinated Software Carpentry and Instructor Training workshops

2016–2017 **Postdoctoral researcher**, *University of California, Davis*.

C. Titus Brown, supervisor.

Achievements:

- Oversaw development and deployment of Reproducible Research with R lessons for the Data Carpentry Foundation

2014–2016 **Postdoctoral scholar**, *University of Kansas*.

James R. Walters, supervisor.

Achievements:

- Developed tools to analyze large empirical and simulated molecular datasets
- Implemented and interpreted complex statistical modeling on ecological and genomic data, including differential expression analysis
- Formalized novel statistical models to describe bacterial infection frequency while correcting for relatedness

2012–2014 **Postdoctoral researcher**, *University of California, Davis, Davis, California*.

David J. Begun and Michael Turelli, supervisors.

Achievements:

- Coordinated multi-laboratory effort to assess the use of a bacterial infection to control an invasive insect
- Executed comparative genomic analysis of invasive species
- Created bioinformatics pipeline to import, trim, and map genomic data

Statistical methods

Deep learning in R & Python using Keras and TensorFlow

Deep learning in python with pytorch and fastai

Machine learning in R & python

Linear and mixed-effects models in R

Forecasting with ARIMA, prophet, and LSTM

Hierarchical Bayesian modeling and inference in R and stan

Computer skills

Data analysis R, Python

Reproducibility docker, knitr, RMarkdown, L^AT_EX, jupyter notebooks,

Version control git, GitHub, GitLab

Cloud computing AWS ML Pipeline & SageMaker, Applied AI with IBM Watson

Misc. BASH, SQL