

# Christopher Hamm

*Lead Data Scientist*

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USA

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📄 [butterflyology.github.io](https://github.com/butterflyology)

## 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.

## 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

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## 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*

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## 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

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## Computer skills

Data analysis R, Python

Reproducibility docker, knitr, RMarkdown,  $\LaTeX$ , jupyter notebooks,

Version git, GitHub, GitLab

control

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

Misc. BASH, SQL