Christopher Hamm

Lead Data Scientist

Carmichael, CA 95608
USA
✉ *butterflyology@gmail.com*
butterflyology.github.io

Summary

Lead Data Scientist with a strong experimental background and 10+ years experience using reproducible research and rigorous analysis to generate unique insights and create value. Involved with Software Carpentry Foundation as 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 - Crop Science - Decision Science*.
Naveen Singla, supervisor.
Achievements:
- Platinum Pinnacle Award for creating and implementing company-wide digital fluency curriculum
- Supervised 30+ machine learning projects
- Develop, promote, and distribute best practices curriculum for enterprise data scientists
- Organize, coordinate, mentor, and teach data fluency workshops
- Coordinate 15 digital fluency trainers
- Develop proprietary curriculum for company specific workflows
- Created neural network forecasting models for supply chain
- Member:
  - Data Science Center of Excellence
  - Model Governance Team
  - Data Management Team

2017–2018 **Data Scientist**, *Monsanto Company*.
Shawn L. Stricklin, supervisor.
Achievements:
- Developed and implemented a program to simulate the vegetable breeding pipeline
- Implemented predictive modeling to predict genotype sample submission frequency
- Organized and coordinated Software Carpentry and Instructor Training workshops
- Created gradient boosted regression model to identify disease susceptible genotypes
- Provided *ad hoc* statistical support to 10 plant breeders

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`, LaTeX, jupyter notebooks,
Version control	`git`, GitHub, GitLab
Other	`BASH`, `SQL`