Christopher Hamm

Data Science Training Lead

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Summary

Data Science Training Lead and 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. Strong teacher using research-based pedagogy and a Software Carpentry Foundation Trainer.

Experience

2018–Present **Lead Data Scientist**, *Bayer - Decision Science*.
Nalini Polavarapu, supervisor.

- **Technical Project Management:**
  - Supervised 30+ machine learning projects
  - Led a team of Data Scientists and Educators
  - 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 - have instructed over 1200 learners in 3 years.
  - 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

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

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`
Cloud computing	AWS ML Pipeline & `SageMaker`, Applied AI with IBM Watson
Misc.	`BASH`, `SQL`