

Keith Hultman, Ph.D.

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Skills

- **Analytic Methods:** Experience with linear and logistic regression, supervised and unsupervised machine learning, A/B testing and textual analysis
- **Data Software:** Proficient in R, Excel, and Perl for data analysis and model testing; proficient in creating data visualizations using Excel, R, and Tableau; experience with Microsoft SQL Server for database and data warehousing
- **Writing:** Proficient in technical writing including authoring 7 peer-reviewed publications, grant writing, and editing
- **Presenting:** Charismatic and confident public speaker with award-winning experience presenting to technical and lay audiences

Experience

Postdoctoral Research Fellow

September 2009 - August 2013

Northwestern University

- Developed research program involving next-generation sequencing of neural crest transcripts
- Established zebrafish as a model system in the laboratory and managed 126-tank facility housing up to 7000 fish
- Analyzed 36 GB of DNA sequence data and identified >10 genes uniquely expressed in neural crest cells that were previously unknown
- Automated methods for image acquisition and analysis for phenotypic effects (ImageJ) that reduced microscope time by 90%
- Led a team of five students on independent zebrafish projects

Adjunct Professor

September 2013 - Current

- Instructor for Introductory Biology at Loyola University
- Instructor for Human Genetics and Society at Elmhurst College
- Developed and published a hypothesis-driven laboratory module for biology education: Hultman and Mellgren (2014) Fetching SNPs: A Dog Genotyping Laboratory for Undergraduate Biology (GSA PREP)

Independent Projects

- Identified gene duplications (2003) using Perl and the BLAST application in genomic sequence
- Conducted pharmacological screen (2006) with >1200 drugs and developed quantification methods for cell migration assay; Analyzed dose-response curves to identify gene-drug interactions
- Explored the College Scorecard data (2015) using k-means clustering and linear regression; I found that selective colleges that don't select for high SAT applicants produce a graduate income level that is no better than non-selective schools with similar SAT scores

Education

Elmhurst College, Elmhurst, Illinois

exp. July 2017

Masters in Data Science

Washington University School of Medicine, St. Louis, Missouri

May 2009

Ph.D. Molecular Genetics and Genomics

University of Saint Thomas, St. Paul, Minnesota

May 2001

B.A. Biology, magna cum-laude

Hobby

Avid rock climber; I've climbed on El Capitan and up to 5.12b in difficulty