

# Keith Hultman, Ph.D.

8828 Olcott Ave Morton Grove, IL 60053  
312-857-5243

keithhultman.com  
keithh@gmail.com

---

## Skills

- **Analytic Methods:** Experience with linear and logistic regression, k-means and agglomerative clustering, decision trees and random forest, A/B testing, sentiment analysis of text, and time series forecasting
- **Data Software:** Fluent in R for data analysis and machine learning including implementing R Shiny interactive applications; proficient in creating data visualizations using Tableau and ggplot2; additional experience with Perl, SQL, and Python and AWS cloud computing
- **Writing:** Experience in technical writing, including 7 peer-reviewed publications, grant writing, and editing for scientific journals
- **Presenting:** Charismatic and confident public speaker with award-winning experience presenting to technical and lay audiences

## Experience

### **Visiting Assistant Professor, Elmhurst College** **Aug 2016 – Jun 2017**

- Designed and taught upper level Bioinformatics course focusing on reproducible research methods in genomics using R markdown
- Implemented RStudio Server on AWS Cloud for student lab use
- Developed an interactive R Shiny application to analyze alumni survey

### **Postdoctoral Research Fellow, Northwestern University** **Sep 2009 - Aug 2013**

- Developed research program involving next-generation sequencing of neural crest transcripts during epithelial-to-mesenchymal transition
- Led a team of five on independent research projects
- Established zebrafish as a model system in the laboratory and managed 126-tank facility housing up to 7000 fish
- Analyzed 36 GB of RNA 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 usage time by 90%

### **Adjunct Professor**

**Sep 2013 – Aug 2016**

- Instructor for Introductory Biology, Molecular Genetics, Development, and Human Genetics and Society at Elmhurst College and Loyola University
- Developed and published a hypothesis-driven dog genotyping laboratory

### **Selected Independent Projects**

- (2016) Developed an ensemble predictive model for product sales of bakery goods in Grupo Bimbo Kaggle competition, decreased error rate by 50%
- (2006) Conducted pharmacological screen with >1200 drugs and developed quantification methods for cell migration assay
- (2003) Identified gene duplications using Perl and the BLAST algorithm in genomic sequence

## Education

### **Elmhurst College, Elmhurst, Illinois**

**May 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