

# Dakota Hawkins

## Contact

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GitHub: <https://github.com/HawkinsDakota>

## Work Experience

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<i>Current</i> July 2015	Pacific Northwest National Laboratory, Richland, WA <i>Post Baccalaureate Research Assistant</i> Worked in the Applied Statistics and Computational Modeling group under the Computational and Statistical Analysis division. Research focused on bioinformatic-based projects such as analysis of -omics data and development of new quantitative tools to assist researchers.
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2013 – 2015	Westminster College, Salt Lake City, UT <i>QUARC Student Statistics Consultant</i> Helped develop quantitative reasoning on Westminster College Campus. Responsibilities focused on aiding in statistical analysis for local projects, teaching in-class lessons, and developing new quantitative literacy courses for Westminster College
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## Education

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2010 – 2015	Bachelor of Science, <b>Westminster College</b> , Salt Lake City, UT <i>cum laude</i>   Majors: Biology and Mathematics GPA: 3.7
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## Research

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Mar. 2016 – Present	Pacific Northwest National Laboratory, Richland, WA Aided in protein-based stable isotope probing experiments by running analysis pipelines to calculate labeling statistics.
Nov. 2015 – Present	Pacific Northwest National Laboratory, Richland, WA Provided statistical support to determine differences in -omic make-up of the fecal microbiome between successful and unsuccessful gastric bypass patients.
July 2015 – Feb. 2016	Pacific Northwest National Laboratory, Richland, WA Helped create and implement displays and algorithms to visualize and quantify shotgun proteomic data.
2013 – 2014	Westminster College, Salt Lake City, UT Developed novel program in Python for automating detection of singing on the nest in field recordings of Northern Mockingbirds.
2012 – 2013	Westminster College, Salt Lake City, UT Collected field recordings of House Finch songs to compare urban and non-urban song dialects.
Jan. 2012 – June 2012	University of Utah Health Care, Salt Lake City, UT Aided in genetic analysis running reverse transcription and PCR analysis.

## Relevant Course Work

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Math	Mathematical Biology (I & II), Differential Equations, Mathematical Statistics, Probability and Statistics, Applied Statistics, Statistics for the Life Sciences, Networks, Abstract Algebra
Science	Genetics, Cell Biology, Organic Chemistry, Developmental Biology, Ecology
Computing	Scientific Computing, Intro to Data Structures

## Programming Languages

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- Python: Developed program to automate detection of bird songs in field recordings.  
<https://github.com/HawkinsDakota/SOTN>
- R: Created programs for -omics data analysis and visualization.  
Proprietary
- MATLAB: Used for numerical analysis of different mathematical systems.  
<https://github.com/HawkinsDakota/MCM2015>
- Java: Used in class for object-oriented programming and data structure creation.  
<https://github.com/HawkinsDakota/DataStructure>

## Selected Posters and Presentations

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- 2014 *Detecting Singing on the Nest*  
Westminster College Undergraduate Research Conference  
Presented undergraduate work to automatically isolate bird songs in field recordings.
- 2014 *An Interdisciplinary Quantitative Analysis and Research Cooperative (QUARC) at Westminster College*  
Electronic Conference on Teaching Statistics  
Helped present current activities and goals of QUARC to promote quantitative reasoning at Westminster College.
- 2014 *O Captain! My Captain!*  
Mathematical Association of America, Intermountain Section  
Presented methods to determine the best college sports coach over the past century.
- 2014 *Introducing QUARC*  
Westminster College - Tutorpalooza  
Presented activities and goals of QUARC to fellow tutors and aids on Westminster campus.
- 2013 *Frequency Characteristics of Urban House Finch Songs*  
Ecological Society of America  
Presented undergraduate research on house finch dialects in urban areas within Salt Lake.
- 2013 *Frequency Characteristics of Urban House Finch Songs*  
Utah Conference on Undergraduate Research  
Presented undergraduate research on house finch dialects in urban areas within Salt Lake.

## Awards and Accolades

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- 2016 Outstanding Performance Award – Pacific Northwest National Laboratory
- 2014, 2015 Honorable Mention – Mathematical Competition in Modeling
- 2013 – 2015 Gore Math/Science Scholarship – Westminster College
- 2013, 2014 Gore Math/Science Summer Research Grant – Westminster College
- 2012 Scholars Summer Research Grant – Westminster College

## Professional Affiliations

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- 2014 – Beta Beta Beta (Biology Honor Society)