Dakota Hawkins

Contact

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Work Experience

2015 – 2016 | Pacific Northwest National Laboratory, Richland, WA
Post Baccalaureate Research Assistant
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.

2013 – 2015 | Westminster College, Salt Lake City, UT
QUARC Student Statistics Consultant
Helped develop quantitative reasoning on Westminster College Campus. Responsibilities focused on aiding in statistical analysis for local projects, teaching in-class lessons, and devoloping new quantitative literacy courses for Westminster College

Education

2016 – Present | Doctor of Philosophy, **Boston University**, Boston, MA
Bioinformatics

2010 – 2015 | Bachelor of Science, **Westminster College**, Salt Lake City, UT
cum laude | Majors: Biology and Mathematics
GPA: 3.7

Research

Jul. 2016 – Present | Stefano Monti Laboratory at Boston University, Boston, MA
Used general linear models to determine cancer-specifc immune response in tumor cells.

Jul. 2016 – Present | James Galagan Laboratory at Boston University, Boston, MA
Conducted ChIP-Seq and RNA-Seq experiments to help map the transcriptional regulatory network of *E. coli*.

Mar. 2016 – Jul. 2016 | Pacific Northwest National Laboratory, Richland, WA
Aided in protein-based stable isotope probing experiments by running analysis pipelines to calculate labeling statistics.

Nov. 2015 – Jul. 2016 | Pacific Northwest National Laboratory, Richland, WA
Provided statistical support to determine differences in -omic make-up of the fecal microbiome between successful and unsuccesful gastric bypass patients.

Jul. 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 – Jun. 2012 | University of Utah Health Care, Salt Lake City, UT
Aided in genetic analysis running reverse transcription and PCR analysis.

Relevant Course Work

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

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
C++:	Self-taught basic C++ using the book *Essential C++* by Stanley B. Lippman. https://github.com/HawkinsDakota/EssentialCpp
Java:	Used in class for object-oriented programming and data structure creation. https://github.com/HawkinsDakota/DataStructure

Selected Posters and Presentations

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 Cooperate (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

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

Professional Affiliations

2014 – Present Beta Beta Beta (Biology Honor Society)