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 – *Current* — 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

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 – June 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
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*
	Westmisnter 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 – 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 –	Beta Beta Beta (Biology Honor Society)