Matthew Moreno

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Education

Bachelors of Science in Mathematics, Computer Science (GPA: 3.94/4.0) Expected: May 2017
Minor in Chemistry
University of Puget Sound, Tacoma, WA

Relevant Coursework

Mathematics: Linear Algebra, Ordinary Differential Equations, Partial Differential Equations, Topology, Probability, Mathematical Statistics, Complex Analysis
Computer Science: Assembly Language & Computer Architecture, Programming Paradigms, Introduction to Artificial Intelligence

Skills

Programming Languages: C, Java, OpenCL, Prolog, Haskell, Python
Miscellaneous: LaTeX, Wolfram Mathematica, Bash

Academic Awards

- Dean's List (Spring 2014-Present)
- Member of Otis C. Chapman Honors Program (2013-Present)
- Recipient of Honors Alumni Scholarship (2015-2016)
- Recipient of Thomas and Hilda Jack (2014-2015) and Sprenger (2015-2016) Scholarships in chemistry
- Recipient of McGill Family (2015-2016) and Richard McKnight (2015-2016) Scholarships in mathematics
- Recipient of University of Puget Sound Trustee Scholarship (2015-2016)

Research Experience

Automated Extraction of Mouse Ultrasonic Vocalizations from Noisy Recordings — Tacoma, WA Summer 2015
- *Student Researcher*

- Designed, applied for grant funding, and carried out project with advisor Adam Smith.
- Funded for eleven weeks as a NASA Research Scholar.
- Developed and tested filtering algorithms inspired by the Sobel Edge detection method that, after being trained on human-annotated spectrograms of mouse vocalizations, distinguish between true mouse vocalization signals and background noise.
- The project culminated in a poster session on campus attended by faculty, summer research students, and other students.

COMAP Mathematical Contest in Modeling — Tacoma, WA Spring 2015, 2016
- *Contest Participant*

- Collaborated in a small team of three students for four days to develop and a mathematical model in response to a prompt.
- The project results in a journal-style paper describing our model, results, and outlining reccomendations to policy makers.
- In 2015, developed an epidemiological model to investigate the spread of Ebola virus disease and make recommendations on vaccine distribution.
- In 2016, developed a model of satellite fragmentation events and the subsequent disbursement of debris in orbit to investigate the feasibility of quick-response efforts to neutralize debris generated by satellite explosions and collisions.

US Department of Agriculture Horticultural Crops Research Unit — Corvallis, OR June 2013 – Present
- *Biological Science Aide*

- Collect data for patent applications, perform plant propagation, assist with field maintenance.

John Fowler Laboratory at Oregon State University — Corvallis, OR Summer 2011, 2012
- *Laboratory Assistant*

- Performed experimental inquiry into the role of the exocyst complex in *Arabidopsis thaliana* culminating in a symposium presentation.

Other Experience

University of Puget Sound Center for Writing, Learning, and Teaching September 2015 – Present
- *Tutor*

University of Puget Sound Mathematics and Computer Science Department September 2014 – Present
- *Tutor and Grader*

University of Puget Sound Chemistry Department September 2013 – Present
- *Storeroom Assistant*