Jordan Dodson
Curriculum Vitae

3453 Lakebrook Dr.
Murfreesboro, TN 37130
✆ (615) 785 2172
✉ jordandodson22@gmail.com

Education

2010–2015	**B.S. Mathematics**, Middle Tennessee State University.
	GPA – 3.985, Math & Science GPA – 4.0
	Minor in Chemistry
2008	**Governor's School for the Sciences**, University of Tennessee at Knoxville.

Experience

2013	**Harvard University**, Institute for Applied Computational Science.
	During this internship, I developed machine learning tools for use by petroleum engineers. The primary goal was to use neural networks to improve yield predictions for oil and gas wells.

Awards

Nation

2012-2014	Barry M. Goldwater Scholarship in Mathematics, Science, and Engineering

University

2013	Provost's Award (highest academic honor bestowed by MTSU)
2013	Who's Who (one of 32 students)
2011-2012	Bart McCash Honors Scholarship (awarded on two occasions)
2010-2014	Presidential Scholarship

Department

2013	Thomas Forrest Abstract Algebra Award
2012	Hypercube Computational Chemistry Award
2012	Best Student Chemistry Talk at Tennessee Academy of Science Centennial Meeting
2011	Ralph E. Sharp Outstanding Sophomore Biology Student
2010-2013	Elizabeth and Creighton Rhea Top Pre-Medicine Student
2010	Ellis Rucker Freshman Biology Scholarship

Programming

Languages	Scala, Python, C/C++, Java, Julia, Javascript, SML
Paradigms	Functional, Object-Oriented
Web Dev.	HTML5, CSS, Play Framework

Undergraduate Research

Project	*A study of the generalized anomeric effect in small molecules, 2011*
Adviser	Prof. Preston MacDougall
Description	The high-performance computing resources at MTSU were used to investigate why certain conformations are favored in small molecules exhibiting the generalized anomeric effect.
Project	*Investigation of the anomeric effect in biologically significant carbohydrates, 2012*
Adviser	Prof. Preston MacDougall
Description	*Ab initio* calculations were performed for a series of carbohydrates known to exhibit the anomeric effect. A conformational search was carried out for each species in the study. Charge density analysis was used to investigate the origin of the anomeric effect.

Papers

1. Semiclassical entanglement analyses in a non-degenerate parametric oscillator (NDPO). Conference proceedings: Rochester Conference on Coherence and Quantum Optics. doi: 10.1364/CQO.2013.M6.44

Talks

1. "A computational investigation of the generalized anomeric effect," University of Memphis undergraduate research conference, Memphis, TN, Feb. 2012.
2. "A QTAIM investigation of the generalized anomeric effect," Tennessee Academy of Science centennial meeting, Nashville, TN, Nov. 2012.

Posters

1. "Investigating the conformational preferences of small molecules," MTSU Scholars Day, Murfreesboro, TN, Mar. 2012.
2. "A computational study of the anomeric effect," Austin Symposium on Molecular Structure and Dynamics, Dallas, TX, Apr. 2012.
3. "Conformational insight from charge density analysis," Southwest Theoretical Chemistry Conference, College Station, TX, Oct. 2012.

4. "The anomeric effect in biologically significant carbohydrates," Conference on Current Trends in Computational Chemistry, Jackson, MS, Nov. 2012.

Leadership Positions

2012	Student representative of the Honors College
2011	Adviser to Dean of the Honors College
2011	Secretary of MTSU Chemistry Society
2010	Secretary of Tennessee DECA

Honor Societies

Phi Kappa Phi

Omicron Delta Kappa

Pi Mu Epsilon

Hobbies

Write and solve programming problems on codewars.com (ranked in top 2%)

Read 55 books (16700 pages) annually (average)