

Dr. ALEX ALBAUGH

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SUMMARY

Driven chemical engineer with a focus in computation, simulation, and theory. Advanced analytical and quantitative skills with strong communication and collaboration abilities. Looking to tackle important problems while continuing to learn.

EDUCATION

University of California, Berkeley

Berkeley, CA, 2018

Ph.D. in Chemical Engineering

Minor in Computational Science & Engineering

University of Michigan

Ann Arbor, MI, 2012

B.S.E. in Chemical Engineering

Summa Cum Laude

EXPERIENCE

Property Options Group

Quantitative Researcher

- Creating numerical models and Python codebase to value real estate options
- Conducting independent research and data analysis to determine accurate market conditions for option valuation

Freelance

2019-Present

Northwestern University Department of Chemistry

Postdoctoral Fellow

- Developing computational models and simulations to understand mechanisms of chemically-fueled molecular motors
- Investigating enhanced catalytic diffusion using novel simulation methods and models
- Improving Monte Carlo and transition path sampling for chemical design problems

Evanston, IL

2018-Present

Partial *f*

Quantitative Researcher

- Developed market simulations in order to understand and predict cryptocurrency derivative performance
- Collaborated with multi-national team in developing a cryptocurrency product

Freelance

2018-2019

UC Berkeley Department of Chemical & Biomolecular Engineering

Graduate Student Researcher

- Developed innovative methods for molecular simulations that surpassed current methods in accuracy and efficiency
- Effectively communicated through presentations at American Chemical Society and TSRC conferences and articles in *Journal of Chemical Physics*, *Journal of Physical Chemistry*, and *Journal of Chemical Theory and Computation*
- Collaborated with researchers at University of Southampton (UK), New York University, and Los Alamos National Laboratory forging strong relationships through successful joint projects

Berkeley, CA

2012-2018

Graduate Student Instructor

- Created and taught lessons for weekly sections of 10-40 students
- Held open office hours to assist with assignments and provide student mentorship
- Created and graded homework sets, class projects, and examinations

University of Michigan Department of Chemical Engineering

Undergraduate Research Assistant

- Independently investigated polymer behavior using simulations to discover shortcoming of a common polymer model
- Communicated with papers in *Macromolecules* and *AIChE* journal and poster at Society of Rheology annual meeting

Ann Arbor, MI

2011-2012

COMPUTER SKILLS

Applications: Microsoft Office, MATLAB, Aspen, COMSOL, Mathematica, Git, LaTeX, TensorFlow

Languages: Python, Fortran, C++, C, Bash, OpenMP/MPI

AWARDS

Outstanding Graduate Student Instructor, 2017

James B. Angell Scholar, 2010-2012

University Honors & Dean's List, 2008-2012

Award of Excellence Scholarship, 2008-2012

ACTIVITIES

Urquhart Memorial Community Band, 2016-2018

American Institute of Chemical Engineers, 2010-2012

Michigan Marching Band, 2008-2011

INTERESTS

running, reading nonfiction, video games, vegetarian cooking, college football