Ethan Rietz

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https://erietz.github.io

Education

Oregon State University	2021-Pres
Bachelor of Science: Computer Science	Corvallis, Oregon
Indiana University Bloomington	2019 – 2021
Ph.D. Student: Physical Chemistry & Scientific Computing (GPA: 3.76)	Bloomington, Indiana
Iowa State University	2013 – 2017
Bachelor of Science: Biochemistry (GPA: 3.51)	Ames, Iowa

Professional

Agilent Technologies — 2017 – 2019
Manufacturing Associate — Ankeny, Iowa
Manufactured liquid consumable products (gels, buffers, DNA/RNA ladders and markers) for Agilent's capillary electrophoresis instruments in an aseptic environment.

Limnology Laboratory — 2014 – 2015
Chemistry Technician — Ames, Iowa
Worked in a laboratory certified by the Iowa Department of Natural Resources to analyze water nutrients for the Iowa Lakes Survey Monitoring Program.

Research

Indiana University — 2019-2020
Research with Professor Srinivasan Iyengar — Bloomington, Indiana
- Worked on high performance Linux computing clusters to study non-classical carbocation systems computationally.
- Used *Ab initio* molecular dynamics, density functional theory, and vibrational spectroscopy methods to understand energy redistribution in anomalous carbocations and hydrogen bonded systems.

Iowa State University — 2016
Research with Professor Levi Stanley — Ames, Iowa
Studied the catalytic activity of metal-organic framework compounds and asked if the steric and electronic properties of MOFs are tunable upon functionalization of the linker units.

Teaching

Associate Instructor: Head AI — Fall 2020
C117: Principals of Chemistry and Biochemistry — Indiana University Bloomington
- Oversaw four Associate Instructors, two undergraduate teaching assistants, and led weekly meetings
- Organized over 25 instructors to proctor examinations
- Made all exams, worksheets, and Canvas material for the course for over 600 students

Associate Instructor — Spring 2020
C117: Principals of Chemistry and Biochemistry — Indiana University Bloomington

Associate Instructor — Fall 2019
C103: Introduction to Chemical Principals — Indiana University Bloomington

Programming

Coursework

OSU M231 (Python)	Introduction to Computer Science
OSU CS161	Discrete Mathematics
IU B555: (Python)	Machine Learning
IU P583 (Matlab)	Signal Processing and Information Theory in Biology
IU C562	Computational Quantum Chemistry
ISU B349 (UNIX)	Genome perspective in Biology

Projects

vim-terminator (vimscript)	An asynchronous code runner plugin for vim8 and neovim with support for 47 languages.
ultisnips-vscode (python)	A script which converts a directory of code snippets for many languages written in ultisnips format to vscode's json format.
vim-voodoo (lua/python)	Nearly 200 color schemes for neovim with contrast ratios calculated for each scheme according to the Web Content Accessibility Guidelines.
My website (html/md/js)	More information about my programming projects can be found at erietz.github.io