



David Rower

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I'm an aspiring physicist who loves to learn, create, and challenge myself

OBJECTIVE

Work on interesting engineering projects to appreciate the applications of physics in the real world. Develop my technical skills as a scientist.

EDUCATION

Degree: B.S. Physics

GPA: 4.0

Institution: College of Creative Studies, UCSB

Year: Senior

Relevant Coursework: Numerical Analysis, Network Systems, Statistical Mechanics, Waves and Kinetic Theory, Classical Mechanics, Multivariate Calculus, Linear Algebra, Differential Equations

EXPERIENCE

Computational Biophysics May 2016 to current

Atzberger Research Group, Department of Math, UCSB.

Implemented a self-assembling coarse grained lipid bilayer model in Python and LAMMPS (writing C++ code to supplement the existing codebase). Currently studying simulated biological phenomena.

Cheminformatics June 2017 to September 2017

OpenEye Scientific Software, Santa Fe, NM.

Developed and studied new filters for molecular shape comparison. Designed numerical experiments to optimize this process. Validated newly implemented numerical algorithms. (C++ and Python)

Network Security March 2017 to current

Enterprise Technology Services, UCSB.

Implemented a Remotely Triggered Black Hole (RTBH) system via ExaBGP and the Flask framework to replace a legacy system. Designed a RESTful API to communicate with the web server.

Gaussian Process Regression September 2016 to December 2016

Atzberger Research Group, Department of Math, UCSB.

Explored uses of Gaussian Processes in machine learning. Prototyped multivariable regression algorithms in Python.

SKILLS

Python: used whenever I have the chance

C++: used for research projects

Matlab: used for research projects

Ubuntu: my favorite OS for development

HTML, CSS, Javascript: used for fun

LaTeX: used for everything

Additional Familiarities: LAMMPS, ParaView, Microsoft Office Suite

PERSONAL

Academics: Physical simulations, applied mathematics, machine learning. Interested in condensed matter physics.

Music: I'm a pianist and cellist. I play much chamber music with friends. Also a cellist in the UCSB Pops Orchestra.

Motorcycles: I'm a licensed rider. I currently own two bikes, one of which serves as a maintenance/modification project.

Web Development: Building and maintaining my website and others has made this a fun hobby on occasion.

Ham Radio: I have a technician class license, occasionally I operate the W6RFU station at UCSB.