

# William Raymond

1118 City Park Ave #330, Fort Collins CO, 80521

Phone: 701-570-8305

Email: williamscottraymond@gmail.com

## Education

Colorado State University

GPA: 3.35 Fall 2012 - Spring 2017

Bachelor of Science - Chemical and Biological Engineering

Bachelor of Science - Biomedical Engineering

## Coursework

Biomedical Engineering Senior Design

- Designed a process for creating nanofibers out of Demineralized Bone Matrix (DBM) as part of a team
- Created, analyzed, and quantified nanofibers of DBM and Polycaprolactone (PCL) in a laboratory setting
- Trained on and operated a Scanning Electron Microscope as an individual major contribution to the project

Biophysics

- Solved problems concerning multiple biological systems, including cell receptor diffusion, voltage-gated channels, and axon conductance
- Used Matlab and Python 2.7 to computationally solve models of systems dealing with diffusion, cell membrane kinetics, and polymer chain kinetics

Cellular Kinetics in Biomedical Engineering

- Learned bioinformatic techniques and search techniques using the NCBI database
- Worked in a team for a semester long project analyzing bifurcation of a circadian rhythm model

## Academic Presentations

Stochastic Simulation Identification Toolkit, Qbio 2017

July 25th - July 28th 2017

- Copresented current version of the Stochastic System Identification Toolkit (SSIT)
- Used the software to create a model during the presentation and showed different methods for solving the model
- Demonstrated how the software can compare parameter fitting routines and parameter uncertainty of models

## Work Experience

Grant Work, Colorado State University

September 2017 - Current

- Worked on developing a stand-alone Python module for solving ODE models
- Maintained a codebase with validation, profiling, and unit testing
- Currently working on tools for solving sensitivity analysis and Finite State Projections efficiently

Honors Thesis Work, Colorado State University

June - August 2016, 2017

- Used scientific Python packages to create a user interface for a gene regulation model
- Worked on a large coding project while maintaining a project on GitHub
- Created a functioning application for teaching and testing various parameters and fits for the model

## Engineering Skills

- Experienced with Matlab, Python, HTML, NetLogo, Git, LaTeX, Unix, and C
- Extensive use of Microsoft Excel, Matlab, and Python in statistical data analysis

## Volunteer Work

Colorado State University Engineering Mentor

August 2013 - May 2014

- Helped incoming freshmen engineers adjust to the college environment and classes
- Volunteered for Engineering E-days and assisted prospective freshmen interested in engineering