

Jacob T. Souther

EDUCATION

Oregon State University
B.S. Computer Science

Expected Graduation: Summer 2020

University of Colorado Boulder
B.S. Chemical and Biological Engineering

Graduated: May 2016

Selected Coursework: Genetics, Genetics Lab, Pharmaceutical Biotechnology

ENGINEERING EXPERIENCE

Senior Design Project, University of Colorado

9/15 – 12/15

- Simulated a MAb purification process from harvest to final product using SuperPro Designer
- Performed detailed cost analysis to determine breakeven price of proposed product
- Developed a Monte Carlo simulation of relevant parameters

Steam Jacketed Tank Heat Transfer Analysis, University of Colorado

1/15 – 5/15

Group Leader

- Led a group of 4 students to determine heat transfer characteristics of sugar solutions heated in a steam-jacketed tank
- Compared calculated heat transfer coefficients with those derived experimentally using mass and energy balances
- Analyzed the effects of changing operating conditions including stir rate and impellor direction; recommended optimal conditions to maximize heating

Ion Exchange Chromatography Column Analysis, University of Colorado

10/15 – 11/15

- Collaborated with a group of 4 students to examine the loading and elution characteristics of an anion exchange chromatography column
- Investigated the effects of protein concentration, pH, and salt concentration in order to obtain recommended optimal conditions to maximize protein separation

TECHNICAL SKILLS

- **Software:** SuperPro, Matlab, Minitab, Mathematica, VBA, Aspen, Microsoft Office
- **Analytical:** Column Chromatography, NMR/IR, Gel Electrophoresis

ADDITIONAL EXPERIENCE

University of Colorado Boulder, CO

5/15 – Present

Student Assistant – Electronics Department

- Assist in processing, separation, and storage of electrical components en route to recycling
- Maintain a clean and safe work environment that adheres to university safety regulations

Cinebarre, LLC Lousville, CO

6/14 – 9/14

Server

- Promoted from Food Runner to Server due to work ethic and communication skills
- Provided timely service in a fast paced environment

HONORS/LEADERSHIP

- Eagle Scout 10/12
- Leadership project included collaboration with local American Legion hall in order to plan and carry out a flag retirement ceremony
- Supervised a group of 20 scouts who assisted in completion of the project