

# ENGINEERING RESUME

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## Education

UNIVERSITY OF ROCHESTER

ROCHESTER, NY

### Bachelor of Science in Chemical Engineering

Anticipated May 20XX

- Minor in Materials Science
- 3.XX cumulative GPA; Dean's List 4 of 5 semesters
- Dean's Scholarship Award for Academic Achievement

## Engineering Experience

FUSION SOLUTIONS, INC.

SYRACUSE, NY

### Engineering Intern

June - August 20XX

*Fusion Solutions provides wastewater treatment for concentrated brines produced from hydraulic fracturing operations in the region.*

- Conducted pilot trials for developing an optimized energy-efficient evaporator/concentrator.
- Performed calculations in Excel and created process flow diagrams detailing mass and energy flows.
- Assisted technical team with lab work flow through set-up and sample collection for crystallizer tests.
- Researched methods of frack water recovery, recycling and purification, including the use of desktop reverse osmosis (RO) and thermal technologies.
- Co-authored a 20-page report for New York State Energy Research and Development Authority (NYSERDA).

## Selected Engineering Coursework and Projects

Thermodynamics

Separation Processes

Fluid Mechanics

Heat & Mass Transfer

Kinetics & Reactor Design

Numerical Methods & Statistics

### Chemical Engineering Laboratory Projects

January 20XX - Present

- *Characterization of Pumps and Hydraulic System:* Analyzed and optimized operating characteristics of a vane pump and a centrifugal pump.
- *Polymer Rheology using Extruder:* Analyzed the rheology for several polymers, controlling flow rate and temperature with extruder operating conditions. Analyzed data to regress parameters for best fitting polymer viscosity equations.

## Campus Activities and Leadership

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### Chem-E Car Team: Fuel Cell Development Team Member

December 20XX - Present

- Developing a car powered by chemical energy source to carry specified load over given distance and stop.
- Currently investigating hydrogen storage for integration of PEM fuel cell to optimize car design.

### Men's Swimming and Diving Team

September 20XX - Present

- Team Captain, 20XX - Present
- University Athletic Association (UAA) All-American Team Nominee, 20XX

## Skills

- Programming and data analysis skills in Python and Microsoft Excel/VBA.
- Experience with laboratory equipment and instrumentation, including extruder, distillation column, heat exchanger, rheometer and centrifuge.
- Basic and organic chemistry laboratory techniques, including NMR/IR/UV-VIS spectroscopy, gas and thin-layer chromatography, and crystallization.
- Knowledge of reactor design, process control, flow diagrams, and process analysis.
- Hands-on problem solving and analytical abilities, both independently and as part of a team.
- Excellent oral and written communication skills demonstrated in technical settings.