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# Rachel Lee

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## Education

# **Cornell University, School of Engineering**

Ithaca, New York

B.S. Chemical Engineering; GPA: 3.68 (Dean's List – Three Semesters)

Expected to Graduate May 2022

- Relevant Courses: Biomolecular Engineering, Chemical Process Design & Analysis, Honors Physical Chemistry I.

Work Experience

## Western University School of Pharmaceutical Sciences

Pomona, California

Research Intern

Jun. 2019–Aug. 2019

- Performed three Type 4 dissolutions with suspensions and powders; analyzed solubility by analyzing graph from HPLC.
- Characterized liposome particle size, zeta potential, entrapment efficiency; adjusted viscosity according to polydispersity.
- Developed formulations and analyzed liposomes under LEICA microscope.
- Conducted research alongside four PhD researchers developing formulations for lipid and liposome drug delivery system.

#### California State Polytechnic University

Pomona, California

Research Assistant Jun. 2019–Aug. 2019

- Conducted research with Dr. Mingheng Li surrounding Reverse Osmosis Water Treatment.

- Used Microsoft Excel to optimize constant parameters in permeate and retentate channel and observed average water flux.

Ding Tea
Hacienda Heights, California
Barista and Cashier
May 2018–Aug. 2019

- Provided excellent customer service and served over 100 quality drinks, which increased popularity of the new store.
- Developed strong work ethic by being punctual, respecting customers and peers, and cooperating with coworkers.

#### **Extracurricular Activities**

# **Cornell University Biomedical Device – Project Team**

Ithaca, New York

Product Development Team Member

Mar. 2019-Present

- Designed, built, and tested FastenPro, a safer and less abrasive replacement to surgical screws.
- Collaborate with peers to brainstorm new ideas, CAD product design ideas, and develop critical thinking.
- Speak to over fifty underclassmen about our previous project.
- Design flyers for project team recruitment and manage social media platforms with updates on our newest project.

#### Cornell ChemE Car - Project Team

Ithaca, New York

Battery Alpha Member

Oct. 2019–Present

- Investigate zinc chloride battery and run calibration tests to optimize speed and consistency.
- Work in a team of 5 and discuss troubleshooting solutions to efficiently improve electrolyte battery composition.
- Research new battery ideas and present to Battery Sub-team and entire ChemE Car team.

## **American Institute of Chemical Engineers (AlChE)**

Ithaca, New York

Sophomore Representative

Oct. 2019–Present

- Collaborate with other AIChE representatives to organize professional and social events for Chemical Engineering students.

#### **Scientista Foundation**

Ithaca, New York

Co-Events Chair

Aug. 2018–Present

Coordinate monthly meetings with recognized professors to discuss their research and journey into STEM.

# Recognition

## Carnegie Hall

New York City, New York

Performer

Mar. 2016

Internationally awarded pianist: Received 3rd place in American Protégé International Competition of Romantic Music.

## **Projects**

#### Video Game (Python)

- Coded and designed an object-oriented space invaders video game with several unique extensions.

## **FastenPro**

- Biomedical device built with CUBMD, which addresses the several issues with surgical screws.
- Device leads to less muscle inflammation and faster bone fracture healing.

#### **Skills**

- Python, HTML, Mathematica, Microsoft Excel, CAD, Canva, macOS, and iMovie.