

EDUCATION**B.S. Chemical Engineering — University of California, Berkeley (Berkeley, CA)** May 2026

- Concentration in Business & Management
- Technical Electives: Bioprocess Engineering (Scale-Up, Downstream), Industrial Economics

A.S. Mathematics, Physics, Chemistry — West Valley College (Saratoga, CA) May 2023

- Technical Electives: C++ Programming (Control Structures, Logic, Methods/Argument Passing)

WORK EXPERIENCE**Compliance Intern — Water & Sewer Utilities, City of Santa Clara, CA** May – Aug 2025

- Conducted weekly analytical chemical testing and quality monitoring for water distribution system
- Spearheaded triennial EPA lead & copper residential sampling of 50 locations citywide
- Independently wrote Python script to index 500+ potable and recycled water (RW) sales records
- Built progress tracker for 10 years of RW and fats, oils, and grease (FOG) plan reviews (Python)

Engineering Intern — Water & Sewer Utilities, City of Santa Clara, CA Aug 2024 – Jan 2025

- Designed metering plans for new housing within city for accurate water and sewer billing
- Compiled maps of water lines in AutoCAD to send as reference for pending construction projects
- Inspected emergency water repair sites and street repairs for retroactive permitting

Mechatronics Intern — PI (Physik Instrumente) LP (Fremont, CA) Mar – Aug 2023

- Developed program for automated alignment of free-space optical audio using Hexapod (6 DoF) positioning system
- Programmed microcontroller (Arduino) and designed GUI (Tkinter) for sequence control
- Created solid models and 3D-printed mounting fixtures for precision motion stage applications

Peer Tutor — Student Success Center, West Valley College (Saratoga, CA) Mar 2021 – Dec 2022

- Subjects: Chemistry, Physics, Mathematics, Writing

AWARDS**Student Research League — AMATYC** Aug 2021

- Grand Prize: co-authored 15-page interdisciplinary research paper with two teammates applying mathematical modeling to address food requirements of future manned missions to Mars

OTHER SKILLS, ADDITIONAL INFORMATION

Core Engineering: Thermodynamics & Chemical Kinetics, Transport Phenomena, Separations Processes, Process Control & Dynamics, Scale-Up/Scale-Down

Operations & Testing: Bioreactor Operation, Unit Operations, Analytical Sampling, Spectrophotometry

Programming & Data: Python (NumPy, SciPy, Matplotlib); MATLAB, C++

Simulation: CAD (AutoCAD, FreeCAD); Aspen HYSYS; Intelligen SuperPro Designer

Instrumentation: Digital Multimeter, Oscilloscope, Microcontrollers (Arduino), Soldering

Operating Systems: Windows; macOS; Linux (Ubuntu, Raspberry Pi)

Language: Spanish (Conversational), Tagalog (Conversational)

US Citizen