

Owen Skriloff

owenskriloff@me.com • 718.938.8809

EDUCATION

Tufts University School of Engineering

Medford, MA

Bachelor of Science in Chemical Engineering, Second Major: Mathematics, Minor: Chemical Physics

May 2025

Cumulative GPA: 3.9/4.0

Engineering Courses: Process Dynamics and Control, Reactor Design, Chemical and Biological Separations, Principles of Polymerization, Applied Numerical Methods, Chemical Engineering Thermodynamics, Heat and Mass Transport

Mathematics Courses: Numerical PDEs, Modeling, Aspects of Data, Probability, Real Analysis, Abstract Algebra

Chemical Physics Courses: Physical Chemistry I and II, Introduction to Modern Physics, Organic Chemistry

Honors & Awards: Dean's List (x6), Summer Undergraduate Research Grant, 2020 Regeneron Science Talent Search Top Scholar, 2020 National Science and Humanities Symposium: 3rd Place Physical Science, AP Scholar with Distinction

RELEVANT EXPERIENCE

Tzanakakis Research Group

Medford, MA

Researcher - Senior Thesis

Jan. 2024 - Present

- Developed and implemented first principles and hybrid digital models for batch and fed-batch stem cell manufacturing processes, leveraging optimization techniques to estimate model parameters from data
- Enabled use of ML techniques by augmenting limited experimental data using 250+ Monte Carlo simulations
- Engineered Neural Network and Multiway Partial Least Squares Regression models trained using augmented data to rank process variables based on relationship with critical quality attributes to improve process understanding

Itaconix Corporation

Stratham, NH

Summer Associate Engineer

Jun. 2023– Aug. 2023

- Purchased parts for, assembled, and completed commissioning report for 100L jacketed stainless steel reactor with heating and cooling loops, condenser, vacuum pump, and pressure tank
- Scaled esterification reaction from 250mL to 50L pilot batch on newly commissioned 100L stainless steel reactor while performing kinetics experiments to minimize production time and reactant use
- Designed new HPLC and GPC methods in OpenLab and ChemStation to analyze over 200 samples for both quality and research and development while aiding the installation and calibration of a new GPC machine
- Performed quality analysis of product samples using particle size, acid number, molecular weight number/average, HPLC area percentage, Gardner Scale, moisture content, and appearance

Araca Inc

Tucson, AZ

Laboratory Technician

Sep. 2020– Dec. 2020

- Ran 25+ experiments in Class 100 clean room relating to both chemical mechanical planarization (CMP) and post-CMP cleaning to advance project objectives for the quarter
- Measured and analyzed 250+ wafers, mixed slurries, programmed polisher, and tested new CMP products
- Created 25+ PowerPoint presentations by analyzing collected data using MatLab, Excel, and LabView to develop graphs and visual aids for clients to use to refine CMP and post-CMP cleaning in their processes

Temple University Smart Biomaterials Lab

Philadelphia, PA

Researcher

Mar. 2019 – Aug. 2019

- Developed and performed methodology to quantify a relationship between stress and mineral deposits generated by electric charges from a piezoelectric composite using simulated body fluid, incubator, and actuator
- Authored research report: An in-vitro evaluation of the relationship between stress and mineralization through the use of a piezoelectric barium titanate composite

OTHER EXPERIENCE

Ralph Lauren Corporation

Nantucket, MA

Sales Associate

Jul. 2022 – Aug. 2022

- Sold over \$65,000 of clothing to clients by generating sales through customer engagement and advising, ordered and transferred products between stores, and completed sales and return transactions

SKILLS AND CERTIFICATES

Computing: Python, Julia, MATLAB, Git (optimization, modeling, physics-informed machine learning, data analytics)

Laboratory Skills: HPLC and GPC (ChemStation/OpenLab), Reactor Assembly, Reaction Scale-Up and Design

SACHE® Certificate Program: ELA952, ELA975, ELA964, ELA950