

Al Shumyatcher

OBJECTIVE

Berkeley graduate with prior background in industrial, polymer and software engineering seeking fast-paced development, optimization and scale-up opportunities in the bioprocess engineering space.

EDUCATION

M.S. in Bioprocess Engineering <i>University of California — Berkeley</i>	May 2024 GPA: 3.49/4.00
M.S. in Macromolecular Science and Engineering <i>Case Western Reserve University</i>	Dec 2024 GPA: 3.52/4.00
B.S.E. in Mechanical Engineering ; B.S.E. in Industrial and Operations Engineering <i>University of Michigan — Ann Arbor</i>	May 2021 GPA: 3.75/4.00

SKILLS

Lab / Unit Ops	Scaleup	Software / Modeling	Communication
rheology data analysis	bioreactor design	Python R	English
drying chromatography	ABEC 300L ÄKTA avant	JMP SuperPro	Russian
extraction N/TFF, UF/DF	Alfa Laval M20 ambr250	PLC / SCADA SQL Server	Spanish
SDS-PAGE centrifugation	cGMP DoE QbD 6σ	PCR t-SNE LSTM RF	public speaking

PROJECT EXPERIENCE (bioprocessing and fluid dynamics)

Lab Affiliate Jan—May 2024

Advanced Biofuels and Bioproducts Process Development Unit (ABPDU)

- Acquired hands-on experience with pilot-scale bioprocessing unit ops and high-throughput systems.
- Maintained batch records and SOPs to measure and evaluate impacts of process design and scale-up.
- Applied QbD framework and DoE to analyze experiment data and optimize equipment parameters.

Organizer and Team Member Oct 2023—May 2024

UC Berkeley Biochemical Engineering Term Projects and Startup Competition

- Designed fermentation production of cadaverine: seed train, reactor, sparging, media prep, process econ.
- Formed team, explored novel terephthalic acid (TPA) synthesis that lowers yearly CO₂ output by 30M tons.
- Pitched TPA in Hult Prize competition; presented cadaverine & ipilimumab purification to industry leaders.

Aircraft Waste Heat Recovery Engineer Jan—Dec 2020

Eaton Corporation & University of Michigan

- Defined project scope and completed technology tradeoff studies, balancing needs, feasibility and budget.
- Made thermal CFD simulations in ANSYS and SolidWorks; devised calculation methods for part selection.

PROFESSIONAL EXPERIENCE

App Developer (pro bono) Apr—Dec 2025

Zelie's Home, a non-profit organization supporting low-income mothers

- Built Android & iOS app for ~30 users, using Flutter, Riverpod, Firebase, Python for Google Cloud.

Founder and Lead Developer Jun 2023—Feb 2025

OneList, a startup

- Designed and built multi-source, multi-sink data pipeline and user intent classification & interaction logic.
- Developed business and marketing strategy, organized and delegated digital and physical media creation.
- Recruited 6 team members; led 2 targeted campaigns that resulted in 441 user signups.

Process Engineer — Automated Layer Picking System (ALPS) Jul 2021—Jun 2023

Procter & Gamble (P&G) — Northeast Fulfillment Center Pilot Plant

- Co-managed 20 technicians: deescalated conflicts, improved culture, reduced planned downtime by 62%.
- Saved 90%+ of time on daily tasks and 10,000+ hours of project work through process automation.
- Raised number of processable SKUs by 129%, increasing warehouse efficiency and saving \$5M annually.
- Qualified equipment, did acceptance testing, enabled smooth startup of first-ever ALPS of that size.

ACTIVITIES & INTERESTS

Norseman Triathlon | hiking too far and getting lost | dancing | comedy, satire | music, instruments | microalgae!