

Lillian Moffatt

Biomedical Engineer

Tempe, US, (602) 319-1238, lillianmoffatt@gmail.com

Professional summary

Biomedical Engineer with a robust foundation in mechanical and sustainable engineering, complemented by hands-on experience in project management and research. Adept at utilizing skills in 3D modeling, MATLAB, and environmental policy to drive innovative solutions and optimize resource efficiency. Committed to advancing sustainable design and engineering practices in collaborative environments.

Employment history

Research Aide, Jan 2025 - Present

Arizona State University - Fromme Lab, Tempe

- Analyzed structural biology data to optimize project outcomes, leading to significant advancements in research methodologies.
- Executed crystallization processes with precision, achieving higher purity levels in samples and enhancing experimental reliability.
- Streamlined the operation of 25 - 170 L Photobioreactors, facilitating more efficient resource use and maximizing experimental output.
- Collaborated with team members to foster a positive lab environment, enhancing communication and collective problem-solving.

Team Project Lead, Aug 2024 - May 2025

Engineering Projects in Community Service

- Led an interdisciplinary undergraduate engineering team which made progress on a classroom sustainability learning product for a local non-profit community partner
- Navigated continually shifting project scope and stakeholder requirements while promoting a collaborative work environment.

Evaluated material performance through rigorous testing, leading to optimized design solutions that addressed specific classroom needs.

Legal Intern, Jun 2023 - Aug 2023

Sacks Tierney P.A., Scottsdale, AZ

- Assisted attorneys with document organization, ensuring seamless access to critical information and enhancing overall case efficiency.
- Conducted thorough legal research, providing actionable insights that contributed to successful case strategies and client outcomes.
- Evaluated case files to identify key issues and streamline workflows, leading to noticeable improvements in case processing times.

Education

Biomedical Engineering (Biological Devices) B.S.E., Aug 2021 - May 2025

Arizona State University, Tempe, US

Graduated Cum Laude with Honors. Selected for the Dean's List.

Courses

OSHA Certification (10 hours), Present

OSHA

CITI Certification, Present

Collaborative Institutional Training Initiative

Laboratory Safety Certification, Present

Environmental and Health Safety

Skills

Cell Culture (*Experienced*), Free Body Diagrams (*Experienced*), MATLAB (*Skillful*), AutoCAD (*Beginner*).

Spectrophotometry (*Experienced*), Project Management (*Skillful*), Design of Experiment (*Skillful*), Environmental Policy (*Skillful*), Research (*Experienced*), Crystallization (*Beginner*), 3D Modeling (*Beginner*), Documentation (*Experienced*).

Links

LinkedIn: [linkedin.com](https://www.linkedin.com).

Additional information

Research Project, Intravaginal Continuous Monitor for Diagnostics and Research

- Worked on a team to address needs in reproductive research
- Developed technical models and performed verification experiments using fractional design
- Finalized a physical prototype for intravaginal monitoring
- Maintained standard operating procedures

Research Project, Adaptive Laboratory Evolution of Cyanobacteria

- Independently researched adaptive mutations of photosynthetic microorganisms
- Developed and performed procedures to prompt microorganism evolution
- Design experimental procedures for cell culture techniques