

Lea Bou Sleiman

ljb06@mail.aub.edu | +961 70 253 353 | Beirut, Lebanon | LinkedIn: [Lea Bou Sleiman](#)

EDUCATION HISTORY

Bachelor's Degree in Industrial Engineering with a Minor in Data Science

Sept. 2021 – May 2025

American University of Beirut – Beirut, Lebanon – GPA: 3.81/4

- Relevant Coursework: Linear Programming, Stochastic Processes, Data Science, Inventory Control, Statistical Quality Control, Machine Learning, Advanced Optimization, Simulation Modeling, Database Systems

Lebanese Baccalaureate Degree in General Science

Sept. 2006 – June 2021

College des St. Coeurs Kfarhabab – Ghazir, Lebanon – Score: 16.61

PROFESSIONAL EXPERIENCE

Final Year Project – Outpatient Process Optimization at CCCL

Sept. 2024 – April 2025

American University of Beirut – Beirut, Lebanon

- Designed a Discrete Event Simulation model in Arena to represent key outpatient workflows for lab-only patients, chemotherapy patients, and unscheduled febrile drop-ins – capturing processes such as check-in, lab testing, physician consultation, and treatment administration using data from on-site observations.
- Demonstrated a digital patient ID check-in system that, based on simulation outputs, reduced check-in queue time by 7.4%.

Production and Operations Intern

June 2024 – Aug. 2024

SMLC Pepsi Cola – Beirut, Lebanon

- Conducted several tests and inspections to ensure PepsiCo beverages met quality standards.
- Managed daily production schedules by aligning resources with the schedule, resolving shortages, and organizing with different departments to meet production goals.
- Collaborated on a Lean project, optimizing warehouse systems across multiple warehouses, which involved researching case studies and understanding methodologies to apply in the manufacturing context, to streamline operations.

Undergraduate Research Assistant – Community-Centered Data Tools

Feb. 2024 – April 2024

American University of Beirut – Beirut, Lebanon

- Worked with Dr. Fatima Abu Salem in the Computer Science department on a project focused on citizen science, leveraging data analytics and AI to empower communities in gathering and analyzing data for social and environmental change.
- Conducted literature review to identify various methods of data collection used in citizen science.
- Attended UN-Habitat event, “Positioning the Baladiye at the Center of Climate Adaptation: Localizing the Intervention” discussing strategies for municipal climate resilience and community engagement.

RELEVANT PROJECTS

Optimization – Fair Movie Recommendation System

Nov. 2024 – Dec. 2024

American University of Beirut – Beirut, Lebanon

- Used matrix factorization and implemented the stochastic gradient descent algorithm to learn movie feature vectors for similarity-based recommendations.
- Selected a movie and used cosine similarity on extracted features to recommend top five similar movies.
- Introduced fairness by modifying gradient updates of user and movie feature vectors during training, reducing gender-based differences in predicted genre ratings.

Engineering Entrepreneurship – PETRACK

Sept. 2023 – Dec. 2023

American University of Beirut – Beirut, Lebanon

- Conducted a survey to identify pet owners' needs and market gaps in pet healthcare solutions.
- Developed PETRACK, a mobile app concept that connects pet owners to nearby veterinarians, pet stores, and other users; prototyped the app using Figma, modeling its main features, including location-based services.
- Presented the project to an external jury led by Prof. Jacques Abboud, highlighting market potential and impact.

SKILLS AND QUALIFICATIONS

- Languages: English (Fluent) | French (Fluent) | Arabic (Native)
- Programming Languages and Libraries: Python, R, NumPy, Pandas, Matplotlib, Seaborn
- Team Collaboration | Leadership | Presentation Design & Delivery