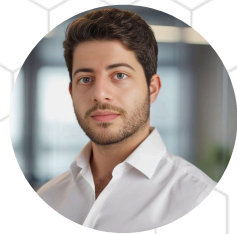


ELIAS AL ALAM

Environmental Engineer



EDUCATION

Masters of Environmental Science

University of Lausanne

08/2021 - 01/2024 Switzerland

- Conducted field studies on riverbed sediment in seven Swiss rivers, analyzing factors affecting coarse sediment supply. Determined the need for bypass structures and sediment transfer, with findings suggesting potential annual savings of over \$2 million if measures were unnecessary
- Developed a supervised machine learning model with 97% accuracy in identifying ocean oil spills from satellite imagery, improving environmental monitoring and response times

Bachelor of Mechanical Engineering

Lebanese American University

08/2015 - 01/2020 Lebanon

- Designed, engineered and manufactured an innovative cost-effective tribometer for testing the wear and friction of RZeppa joints, achieving a manufacturing cost reduction to just 1/40th of commercial alternatives while maintaining high accuracy
- Developed a fully automated smart home and irrigation system using LabVIEW, enhancing energy efficiency reducing water usage by 30% while improving plant health through optimized scheduling and improving user comfort and control

EXPERIENCE

Research Assistant

University of Lausanne

03/2023 - 09/2024 Switzerland

- Analyzed 12 years of glacial elevation data from 6 glaciers, identifying critical erosion points that informed regional management policies and sediment strategies
- Implemented innovative techniques in QGIS and ArcGIS to preprocess digital elevation models, eliminating ice and water layers, resulting in the creation of a reliable dataset which improved data integrity
- Conducted in-depth field studies alongside a diverse group of 8 scientists, collecting data from Thrift glaciers to assess climate impact; this research provided critical insights that shaped future climate modeling efforts for the region

Aquatic Ecology Technician

Aquarius Umwelttechnik AG

08/2023 - 09/2023 Switzerland

- Executed a comprehensive data collection initiative along the Neuchâtel rivers, measuring size, weight, and health of 800+ fish populations, contributing critical information to local conservation efforts and species management decisions
- Compiled and analyzed key environmental data to develop strategies for ecosystem restoration, expected to impact sustainable fishing practices and over 100 communities

LANGUAGES

Arabic	Native	●●●●●
English	Native	●●●●●
French	Proficient	●●●●●
German	Beginner	●●●●●

SKILLS

Python	MATLAB	R	Java
JavaScript	C++	AutoCAD	
SolidWorks	ArcGIS	LabVIEW	
Ansys	Thermodynamics	Statics	
Dynamics	Materials Science	Git	
Fluid Mechanics	Materials Science		
Statistical analysis	Data Visualization		
Machine Learning	Finite Element Analysis		
Computational Fluid Dynamics	Qgis		
Environmental Impact Assessment (EIA)			
Sustainability Assessment	AI Tools		
Remote Sensing	Life Cycle Assessment		
Sustainable Manufacturing	3D modeling		
LiDAR data processing	Data acquisition		

FIND ME ONLINE

in	LinkedIn	https://www.linkedin.com/in/elias-al-alam/
🌐	Swiss Glace Team	https://wp.unil.ch/glace/team/

EXPERIENCE

Geophysical Technician

Geo2x & geool

01/2023 - 03/2023 Switzerland

- Carried out a strategic project with the topography team to adopt DGPS technology for geophone placement, leading to precise data acquisition and the successful recording of over 5,000 data points for analysis and reporting
- Managed the transport, installation, and collection of 5,000+ geophones in challenging conditions, ensuring full operational readiness and seamless data collection across all areas
- Spearheaded data collection efforts for geophysical studies, engaging with 15 geologists and geophysicists to ensure the acquisition of high-quality geophysical data for the identification of geothermal reservoirs

Judicial Guard

Al Alam Impound

06/2015 - 12/2020 Lebanon

- Implemented compliance protocols for local regulations within a car impound lot, ensuring the safe retrieval of 700+ vehicles per summer while achieving 100% adherence to state regulations and safety standards during operation
- Increased efficiency by {15%} by refining processes and enhancing attention to detail in role management

Mechanical Engineering Technician

DEMCO Steel

05/2019 - 09/2019 Lebanon

- Conducted routine inspections and diagnostics on industrial machinery, identifying and resolving mechanical issues, which improved production efficiency by 25% and reduced downtime by 150 hours per month
- Improved equipment performance by {25%} by assembling and troubleshooting {50} industrial machines

Engineering Technician

Koura General Election Center

04/2018 - 05/2018 Koura

- Resolved technical issues with election equipment at Koura polling center, ensuring uninterrupted voting and improving voter experience through reliable support
- Coordinated training sessions for 15 technical support and data entry agents, equipping them with essential skills and knowledge to address election-related issues, which improved first-contact resolution rates by 20%

HOBBIES

Piano	Stargazing	Hiking	Reading
Tennis	Gaming	Fitness	
Arm-Wrestling			