Mohamed Alsaleh

M.Sc. in Civil / Transportation Engineering

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Personal Portfolio | LinkedIn

Education

M.Sc. in Transportation and Highway Engineering *May 2024–May 2026*
Louisiana State University (LSU), Baton Rouge, LA, USA
- **GPA:** 4.05/4
- **Minor** in Applied Statistics

B.Sc. in Civil Engineering *Sep 2018–Sep 2023*
Jordan University of Science and Technology, Irbid, Jordan
- **GPA:** 3.93/4
- Ranked **2nd** out of **126** in the graduating cohort
- Ranked **1st** for Fall 2021–2022
- On the Dean's List for Scholarly Award and Academic Excellence for **8** consecutive semesters
- Graduation project: "Analyzing Traffic Accidents in Irbid: Spatial–Temporal Patterns and Data-Driven Severity Prediction"
- All coursework was fully graded and included in the GPA; no Pass/Fail option was used during the COVID-19 pandemic

Professional History

Civil Engineering Intern | DI WOLFGANG HÖPPL | Austria *Jul 2022–Oct 2022*

- Summer internship at DI WOLFGANG HÖPPL, Austria, organized by IAESTE, spanning three months, following a highly competitive selection process and allowing me to gain multidisciplinary field and office experiences.
- Applied Civil 3D, QGIS, AutoCAD, and Python for engineering design and analysis tasks.
- Collected and processed geospatial data (GPS, Total Station, Sonar) to generate 2D/3D contour maps and plans.

Key Projects: Trimble X7 Laser Scanning of a Building, Mürz River Project, and Other Projects:

- Evaluated and discouraged unsuitable 3D planning tools, preserving resources and budget, while identifying cost-effective 3D point cloud software, ReCap Pro, resulting in significant cost savings.

- Proactive assistance in collecting data from the field using modern engineering tools (GPS, Total Station, and Sonar Device), utilizing the collected data to build 2D and 3D plans using contour maps.

Part Time Lecturer | ALQUSOUR ACADEMY | Jordan *Sep 2023–Apr 2024*

Instructed undergraduate engineering students in core science and engineering courses at ALQUSOUR ACADEMY.

Courses Taught: Statics; Engineering Economics; Physics 101; Calculus 101–102; Chemistry 101.

Research Affiliations

Graduate Research Assistant | Louisiana State University (LSU) | United States *May 2024–Present*

Project: Ground-in Edge and Centerline Rumble Strip/Rumble Stripe Evaluation and Best Practices (**LTRC Funded, 204,983 USD**)

- Led experimental and data-driven evaluation of rumble strip noise and vibration utilizing AASHTO, SAE, and ISO standards.
- Independently spearheaded all processes of the project: site selection, company meetings, procurement, data collection team coordination, and analysis.
- Successfully led the procurement of two Class 1 sound level meters, a triaxial accelerometer, a human vibration meter, and associated accessories, managing a budget of \$11,000.
- Achieved results beyond the project scope despite budget constraints by leveraging market research, technical resourcefulness, and cost-efficient procurement.
- Developed Python and R scripts for data extraction, run slicing, and computation of key descriptors (LeqA, LeqC , LAFmax, SEL, LA*, 1/3 OBA).
- Co-authoring two peer-reviewed papers: experimental evaluation and ML-based noise prediction.
- Designed and implemented data collection and analysis protocols, including Python and R scripts for acoustic/vibration metrics.
- Directed a multidisciplinary field team (technicians, undergraduate, and PhD students).
- Selected to present the research at the 104th TRB Annual Meeting (four accepted posters).
- Contributed to drafting three research proposals.

Undergraduate Degree Research Stream Graduation Project | Jordan University of Science and Technology (JUST) | Jordan *Oct 2022–Jun 2023*

- Developed a machine learning model to predict accident severity in Irbid City using data spanning 2016-2021.
- Spearheaded the implementation of supervised learning, specifically the Random Forest algorithm, with data preprocessing in MS Excel and model implementation in Python.
- Employed QGIS for hotspot identification, using Kernel Density heat maps.
- Delivered a standout presentation to the faculty panel. Achieved an A+ final grade.
- Resulted in a published journal paper in the Engineered Science journal, a Q1 transportation engineering journal.

Leadership and Involvement

Elected President, ITE LSU Student Chapter *May 2025–Present*
Louisiana State University (LSU) | United States
Leading initiatives to improve student participation, industry-academic collaboration, and transportation research excellence.

Elected Treasurer, ITE LSU Student Chapter *Sep 2024–May 2025*
Louisiana State University (LSU) | United States

Activities: Conceptualizing an entrepreneurship project with an innovative idea, *2021* including a Business Model Canvas, SWOT Analysis, and Feasibility Analysis.
Jordan University of Science and Technology (JUST) | Jordan

Competitive Awards and Recognitions

Slade Exley Scholarship — Deep South ITE (DSITE) — Awarded a competitive $1,000 scholarship in recognition of academic achievement and contributions to transportation engineering.
Institute of Transportation Engineers (ITE), Deep South Section

2026

Graduate Research Award (2nd Place) — 13th Annual CEE Graduate Student Research Conference.
Louisiana State University

2025

Gulf Region Intelligent Transportation Systems (GRITS) Scholarship — Recipient for the 2024 School Year.
Gulf Region Intelligent Transportation Systems (GRITS)

2024

Bentley Travel Grant — Awarded by Louisiana Transportation Research Center (LTRC) to attend the TRB Annual Meeting, Washington, DC.
LTRC / TRB Annual Meeting, Washington, DC

2024

Ranked 2nd out of 126 graduate students — Civil Engineering Graduate Batch.
Jordan University of Science and Technology (JUST)

2023

Ranked 1st in Civil Engineering Cohort — Fall 2021–2022 academic year.
Jordan University of Science and Technology (JUST)

2021–2022

 Dean List for Scholary Award and Academic Excellence — Recognized for academic excellence in eight consecutive semesters.
Jordan University of Science and Technology (JUST)

2018–2023

Master's Degree Featured Courses

Course	Final Grade
EXST 7004 — Experimental Statistics I	A
EXST 7014 — Experimental Statistics II	A
CE 7610 — Traffic Operations and Control	A
CE 7645 — Transportation Systems Analysis	A
CE 7700 — Intelligent Transportation Systems	A
GEOG 4047 — Geographic Information Systems	A+

Computer and Language Skills

Languages: Arabic, Macedonian (Native); English (Fluent, IELTS 7.5).

Technical Skills: Data Analysis and Programming (Python, R, and C++), ArcGIS/QGIS, MS Excel, AutoCAD, LaTeX, PTV Vissim, Civil 3D.

Courses and Certifications

Fundamentals of Engineering (FE) Exam — Expected Completion by Graduation. *May 2026*

Data Analysis with Python — IBM Developer Skills Network. *2024*

Python 101 for Data Science — IBM Developer Skills Network. *2024*

Machine Learning with Python — IBM Developer Skills Network. *2024*

QGIS Mega Course: GIS and Remote Sensing — Beginner to Expert — Udemy (Online). *2023*

Research Conferences

C3	13th Annual LSU CEE Graduate Student Research Conference — March 2025	*2025*
C2	TRB 104th Annual Meeting, Washington, D.C. — January 2025	*2025*
C1	GRITS Annual Meeting, Biloxi, MS — October 2024	*2024*

List of Publications

J1	A. Al-Omari, **M. Alsaleh**, N. Shatnawi. Spatial–temporal analysis and severity prediction of traffic accidents. *Engineered Science*, 34, 1472 (2025). https://doi.org/10.30919/es1472.	*2025*