

Mohanad Diab

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Education

- **Master of Science in Geoinformatics Engineering**, Politecnico di Milano *2021 – 2024, Milan, Italy*
Graduation mark: 110/110 with honours — GPA: 3.9/4.0
 - **Bachelor of Science in Civil Engineering**, Al-Balqa'a Applied University *2015 – 2019, As-Salt, Jordan*
GPA: 3.93/4.0
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Research Experience

- **AI Researcher**, EURAC Research, Institute of Renewable Energy *05/2024 – Present, Bolzano, Italy*
 - Design and innovation of Large Language Models for efficient energy system management.
 - Development of Machine Learning and Deep Learning pipelines to enhance PV systems.
 - Developing privacy-preserving data processing solutions for energy communities.
 - Prototyping IoT and robotics solutions for health inspections of PV systems.
 - **Research Assistant**, Politecnico di Milano *09/2023 – 05/2024, Milan, Italy*
 - Built reinforcement learning agents for computational off-loading in IoT-Edge-Cloud settings.
 - **Research Fellow**, World Vision International *11/2019 – 04/2020, Amman, Jordan*
 - Conducted socio-economic research and training at PSUT.
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Professional Experience

- **Structural Engineer**, Odeh Design Bureau *01/2020 – 09/2021, Amman, Jordan*
 - Consultancy and design of medium to large-scale structures.
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Publications

Peer-reviewed journals

- **Optimizing Zero-shot Semantic Segmentation Performance for RS Imagery** *09/2024*
(Accepted for publication in "Artificial Intelligence in Geosciences")
- **Vision-Language Models as Pseudo-Label Validators in Semi-Supervised Learning: Geo-Locating Medium Voltage Cabins from Google Street View Imagery** *12/2024 (Under Review in MDPI's "Energies")*

International Conferences

- **EVALUATING THE GEOSPATIAL LITERACY OF LARGE LANGUAGE MODELS**
12/2023 (Presneted at GeoAI Conference. Torino, Italy) (Poster)
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Volunteering

- **Podcast and Newsletter Manager**, Polimi Data Scientists *11/2022 – 04/2024, Milan, Italy*
 - **AI Instructor**, Jordan Young Scientists *03/2024, Amman, Jordan*
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Certificates and Awards

- **IELTS Academic (8.5/9)**, British Council *12/2020*
 - **Maeci Scholarship**, Italian Government *09/2021*
 - **DSU Scholarship**, Politecnico di Milano *09/2023*
 - **ESSAI & ACAI 2024 Summer School**, Athens, Greece *07/2024*
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Skills

- **Programming:** SQL, Python, R, Matlab.
- **Data Processing:** Pandas, NumPy, Scikit-learn, Matplotlib, GIT.
- **Deep Learning:** PyTorch, Hugging Face Transformers, AISuite, LangRS.
- **GIS:** QGIS, ArcGIS, Metashape, VisionLidar, drone photogrammetry.