

Fatima Slim

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Education

- **Applied Machine Learning Specialization**
Zaka Academy
Issued: Oct 2025
- **Machine Learning Specialization**
Stanford
University Issued:
Mar 2024
- **Mathematics for Machine Learning Specialization**
DeepLearning.AI
Issued: Dec 2023
- **Master 2 in Medical Physics and Life Imaging**
Lebanese University – Al Hadath - 2020
Appreciation: Good
Modules studied include: Radiotherapy, Image reconstruction, Signal in Imaging, Dosimetry
- **Master 1 in Physics Hydrodynamics**
Lebanese University – Al Hadath - 2019
Appreciation: Good
Modules studied include: Particle Physics, Physics of Plasma, Aerodynamic, Fluid mechanics, Ansys
- **Bachelor degree in physics**
Lebanese University – Nabatieh - 2018
Appreciation: Good
Modules studied include: Physics, Math, Chemistry, Data science (C++, Java)

Professional/Project Experience

American University of Beirut (AUB)

Vision and Robotics Lab, Beirut, Lebanon

Research Assistant

Oct 2024 – Jun 2025

- Developed SLAM systems for object-level reconstruction in autonomous driving using 2D/3D detections and DeepSDF.
- Trained and improved multi-class shape representations for real-time completion and tracking tasks.
- Integrated object detectors like Mask R-CNN and PointPillars for robust 2D-to-3D association.
- Tackled occlusion, view variations, and class confusion in dynamic environments.
- Gained hands-on experience in Linux (Ubuntu), PyTorch, Open3D, MMDetection3D, and Git workflows.

Machine Learning Intern

Jul 2024 – Sep 2024

- Contributed to the lab's deep learning research by working on neural implicit models.
- Built and optimized machine learning pipelines for 3D shape understanding.
- Learned to operate in Linux environments and use tools like Conda, Git, and Python libraries.

Zaka Academy

AI Script-to-Animation Platform

Aug2025 – Oct 2025

- Developed a text-to-video animation pipeline powered by AI agents to convert scripts into visual scenes.
- Built modules for prompt generation, image synthesis, and automated video assembly.
- Integrated text-processing components and diffusion-based generative models.
- Optimized inference pipelines for faster rendering and improved visual coherence.
- Applied hands-on expertise in AI agents, text-to-video synthesis, and generative model deployment.

Other Experience

Physics Instructor, Lebanon

- Delivered physics lessons to high school students (Grades 10–12) over a two-year period.
- Developed strong communication and teaching skills while managing multiple students.

Technical Skills

Tools & Languages: Python, C++, Java, Git, Linux (Ubuntu), Conda, Jupyter Notebook, Bash

Libraries & Frameworks: PyTorch, Open3D, MMDetection3D, Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn, TensorFlow, OpenCV

Machine Learning & 3D Vision: Supervised Learning, Deep Learning, Neural Implicit Representations (DeepSDF), Shape Completion, SLAM Systems, 2D/3D Object Detection, Statistical Analysis, Clustering, Regularization

Languages

Languages:

- Arabic: Native
- English: Fluent
- French: Intermediate