

Foreword.

PhD candidate specializing in automating the generation of virtual environments for autonomous vehicle training. My research integrates multi-modal sensor data, with advanced 3D reconstruction and generative modeling techniques. Passionate about bridging theoretical advancements in computer vision, graphics, and machine learning with impactful real-world applications.

Education.	University of Burgundy-Franche-Comte	Since 12/2023
	Ph.D. in computer science. Working on Generation of Virtual Environments for training autonomous vehicles. Supervisors: Prof. Yassine Ruichek and Dr. Nathan Crombez.	
	University of Dijon Bourgogne	2023
	M.Sc. in Computer Vision and Robotics. Machine learning/ Robotics/ Image processing/ Computer vision.	
	Lebanese International University	2021
	B.Sc. in Computer Engineering. Applied Mathematics/ Electronics/ Software engineering.	

Experience.	Imvia Lab - Research Intern	02/2023-08/2023
	Visuo-tactile perception for in/on-hand manipulation tasks.	
	Element AI - Freelancer	02/2022-05/2022
	Machine learning for emotion detection from images.	
	LIU Lab- Engineering Intern	12/2020-04/2021
	Software engineering for warehouse object detecting and monitoring.	

Skills.

Computer sci:

Python, Java, C++, MATLAB, OpenCV, Sci-Py, Pandas, Git, CUDA, Pytorch, Tensorflow.

Robotics:

ROS, Gazebo, Pybullet. Gibson, Habitat-sim, Isaac, LIDAR Processing, Multi-Sensor Fusion, Arduino, RaspberryPi.

Deep learning:

CNN, Generative models, Attention Models, Transformers, Semantic Segmentation.

3D Reconstruction:

CGAL, PCL, GDAL, Texture Mapping, 3D Modeling.

Publications.

H.Loubani et al. ‘Comprehensive Review of 3D Building Reconstruction: Comparative Study of LoD2 Approaches’, (Under preparation).

Certificates.	GeMSS-Generative Modeling Summer School	Eindhoven - 06/2024
	Hosted by TU/e, DUT, Inria, and Expertise of Google DeepMind Researcher.	
	Machine Learning Real World Projects in Python	Udemy - 03/2023
	Mastering ROS: TurtleBot3	The Construct - 11/2022

Languages.

English C1, French B2, Arabic C2, Italian A2