Mohamed Amine Mechlia
AI || Deep Learning || Computer vision specialist   📍 Nancy, France |
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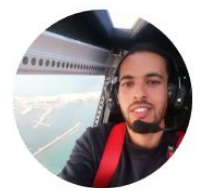
Machine Learning Engineer

Deep Learning Specialist with extensive experience in applying advanced data science techniques, including deep learning and computer vision, to solve complex business problems. Proven expertise in developing real-time image processing algorithms, 3D reconstruction, and optimizing hardware for high-performance applications. Skilled in Python, C++, and a variety of AI frameworks, with a strong track record of delivering impactful insights and solutions in both research and industry environments.

EDUCATION

Master Artificial Intelligence and its Applications in Vision and Robotics
2025– 2026   Faculty of Science and Technology Nancy

Master Degree in Electronics : Microelectronics and Instrumentation
2018 – 2021   Higher Institute of Informatics and Mathematics of Monastir

Work Experience

Embedded Deep Learning Engineer
TELNET Space   Mars 2024 – September 2025   Tunisia

- Development of algorithms for object detection and segmentation of satellite multispectral images, with a focus on hardware optimization for enhanced performance.
- Designed and implemented a Cloud Removal Module for satellite images, intended for in-orbit demonstration.
- Creation of a computer vision accelerator for edge computing, optimized for embedded satellite integration.
- Development of a drone detection solution for anti-drone military applications, incorporating advanced image processing and machine learning techniques.
- Implementation of a CAN communication system between the onboard computer (OBC) and the edge computer unit, to ensure reliable and efficient data transmission in satellite operations.

Embedded Computer Vision Engineer
Nurenda Technologies   Nov 2021 – Feb 2024
Irlande

- Design and implementation of computer vision algorithms for GPS-free navigation systems, utilizing onboard sensors and deep learning models for accurate and reliable positioning.
- Development of a real-time embedded 3D reconstruction technique for drone applications.
- Design and implementation of a Blender add-on to generate synthetic aerial image datasets based on real localization scenarios.
- Preparation and annotation of large-scale datasets for training deep learning models, including image segmentation and object detection tasks to enhance model accuracy and robustness

Projects

FPGA accelerator for ADAS   Micro-optoelectronics and nanostructures
Laboratory
Feb 2020 – Mar 2021 | Monastir, Tunisia

- developing and optimization of an embedded neural network on an FPGA platform for Advanced Driver Assistance Systems (ADAS) applications. The primary goal was to create a system capable of detecting pedestrians and preventing collisions effectively.

Electronic Olive Fruit Fly Trap   IQFarm
Feb 2020 – Dec 2020 | Monastir, Tunisie

Developed a wireless connected monitoring system consisting of automated traps for the identification and recognition of pest insects in agricultural crops.

COMPÉTENCES TECHNIQUES

- Deep learning
- Object recognition and tracking
- Image segmentation
- Feature extraction
- Pattern recognition
- Image analysis
- Motion estimation
- Image registration and alignment
- Image enhancement and restoration
- Machine Learning
- Software development and maintenance
- SLAM, Odometry
- Algorithm development
- 3D reconstruction (Nerf)
- Système embarque
- Python, C/C++
- Caméras (multispectral , stereo Lidar …)

CERTIFICATION

- 3D Reconstruction - Multiple Viewpoints
- IT Specialist – Python
- DeepLearning.AI_TensorFlow Developer
- Scrum Fundamentals Certified (SFC)
- Machine Learning Concepts and Application of ML
- Sequences, Time Series and Prediction
- Natural Language Processing in TensorFlow
- Convolutional Neural Networks