

KARIMA GHAMNIA

PhD Student in Computer Science

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Toulouse, France

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EDUCATION

PhD Student

TéSA

Since 09/2025

Toulouse, France

- Machine Learning for instrument parameter estimation

Mathematical Modeling and Artificial Intelligence

Double Degree INP-ENSEEIH & INSA-Toulouse

2022 - 02/2025

Toulouse, France

- INP-ENSEEIH Engineering Degree: Computer Science and Telecommunications
- INSA-Toulouse Engineering Degree: Applied Mathematics

Electronics, Electrical Energy, and Automatics

INP-ENSEEIH

2021 - 2022

Toulouse, France

Electronics and Embedded Systems

National Polytechnical School of Oran - Maurice Audin (ENPO-MA)

2020 - 2021

Oran, Algeria

PROFESSIONAL EXPERIENCES

Data Scientist Apprentice

Airbus

2022 - 02/2025

Toulouse, France

- Engineering Graduation Project:** CFD simulation and aerodynamics flight data fusion using deep learning models
 - State-of-the-art review to evaluate existing methods and select the most suitable approach for the project.
 - 3D spatial alignment of flight and simulation data using orthogonal projection and Euclidean distance.
 - Developed a fusion model composed of a Fourier feature encoder and a Multi-Layer Perceptron (MLP).
- Flight data smoothing using conditional generative models (VAE, CVAE): Developed and implemented models to reduce noise while adapting to varying flight conditions
- Anomaly detection in time series using RNN, LSTM, and Autoencoders: Improved the identification of irregular patterns and eliminated insignificant outliers.

Intern

Satellite Development Center - ASAL

07/2021

Oran, Algeria

- Explored the steps involved in the realization of the ALSAT-2B observation satellite and its control.

Intern

The Algerian Aeronautical Construction Company

03/2021

Oran, Algeria

- Designed a stabilized power supply electronic board.

STRENGTHS

- Programming

Python

Pytorch

Tensorflow

OpenCV

Pandas

Scikit-Learn

Plotly

C

Matlab

R

Julia

LaTeX

- Key Skills

Machine Learning

Deep Learning

Signal Processing

Image Processing

Statistics

Optimization

Data Assimilation

Data Fusion

Computer Vision

NLP

Transfer Learning

Team Work

Organization

LANGUAGES

French (DALF certificate)

English (C1 Linguaskill 180+)

Arabic



EXTRACURRICULARS

Climate Fresker

Since 2021

- Climate Fresk animator.

Vice President of the Mechanical Activities Club (ENPO-MA)

2019 - 2021

- Coordinate and manage teams to prepare different events.

Member of the American Corner

2019 - 2020

- Participation in the STEM program: Encouraging young women to pursue a career in science.

HOBBIES

- Working out, Running
- Reading
- Cooking, Baking