NIHAD HADJ-SAHRAOUI

AI and IT Systems Developer

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Portfolio

PROFIL

AI Engineer and PhD researcher with strong background in machine learning, computer vision, and deep learning. Bridging AI research with real-world applications through end-to-end system design, from algorithmic development to production deployment in healthcare, biometrics, and video analytics. Experienced in building scalable AI systems using Python, TensorFlow, PyTorch, and OpenCV. Skilled in developing real-time object detection and motion analysis pipelines, with current research focus on bio-inspired models for motion tracking. Adept at transforming complex algorithms into efficient, production-ready solutions.

PROFESSIONAL EXPERIENCE

PHD RESEARCHER & ADJUNCT LECTURER

University of Science and Technology of Oran (USTO). Algeria, Oran

March 2025 – to this day

- Teaching Practical Work in Object-Oriented Programming (Java) and Tools mathematical programming (Matlab).
- Educational monitoring of students.
- Developing novel bio-inspired motion tracking models with expected publications targeting top-tier conferences (IEEE CVPR, ICCV).

SOFTWARE DEVELOPER

Design and consulting office. Algeria, Oran

October 2023 – November 2024

- Developed deep learning models to analyze and segment complex human movements for video-based movement analysis project, using Python, OpenCV, and Mask R-CNN. achieving 92% segmentation accuracy.
- Collaborated with cross-functional teams (designers, project managers, clients) to deliver 5+ AI-enhanced solutions on schedule
- Design and development of management software.
- Provided technical support and system maintenance, resolving 95% of client issues within 24 hours

E D U C A T I O N

University of Science and Technology of Oran (USTO)

2025 - In progress

PhD in Computer Science - Artificial Intelligence

Research Focus: Motion detection and energy tracking in video scenes using impulse neural networks and bio-inspired spatio-temporal filters.

Ahmed Ben Bella Oran 1 University

2021 – 2023

Master's in Computer Science – Decision Support and Intelligent Systems

Relevant Coursework: Machine Learning, Deep Learning, Computer Vision, Pattern Recognition, Optimization Algorithms

Ahmed Ben Bella Oran 1 University

2018 – 2021

Bachelor in Computer Science – Information Systems Engineering

 Relevant Coursework: Software Engineering, Database Systems, Algorithm Design

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TECHNICAL SKILLS

AI/ML Frameworks & Libraries:
TensorFlow | PyTorch | Keras | scikit-learn | OpenCV
Programming Languages:
Python | Java | C++ | MATLAB | PHP
MLOps & Development Tools:
Docker | Git/GitHub | Jupyter | Linux/Unix | Model Deployment
Databases:
PostgreSQL | MySQL | SQL Server | MongoDB
Data/Cloud:
Pandas | NumPy | Google Colab | AWS | Seaborn
Visualization:
Matplotlib | Seaborn

SOFT SKILLS

Research & Technical:
Critical Thinking | Problem-Solving | Attention to Detail | Continuous Learning
Leadership & Collaboration:
Project Management | Teamwork | Communication | Mentoring
Professional   :
Time Management | Adaptability | Client Relations | Technical Documentation

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L A N G U A G E S

- English: Professional working proficiency
- French: Native or bilingual proficiency
- Arabic: Native or bilingual proficiency

PUBLICATIONS

Nawal, SH., Noria, T. & Nihad, HS (2025). Expertise as a signature: continuous implicit authentication based on behavior. *Cluster Comput* 28, 169. https://doi.org/10.1007/s10586-024-04863-z