N I H A D H A D J - S A H R A O U I

AI and IT Systems Developer

(+213)7 95 87 98 31| nihadhsa@gmail.com | linkedin.com/in/nihad-hs

PROFIL

AI Research Scientist and PhD candidate bridging academic research with real-world applications through end-to-end system design. Specialized in computer vision, deep learning, and bio-inspired neural networks with focus on motion detection and video analytics. Experienced in transforming complex algorithms into production-ready solutions for healthcare, biometrics, and intelligent surveillance systems. Proven track record in developing scalable AI pipelines from research prototypes to industrial deployment.

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.
- Conducting cutting-edge research on motion detection using bio-inspired spatio-temporal filters for energy-efficient video analysis
- 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

EDUCATION

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.

Expected Contributions: Novel SNN architectures for energy-efficient video analytics; bio-inspired temporal processing algorithms.

Ahmed Ben Bella Oran1 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

Focus Areas: Software Engineering, Database Systems, Algorithm Design

---

TECHNICAL SKILLS

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

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

---

LANGUAGES

- 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