

# SALIM MILOUDI

Ottawa, ON | (613) 410-7299 | [salim.miloudi@outlook.com](mailto:salim.miloudi@outlook.com) | <https://www.linkedin.com/in/salim-miloudi>

**Data Mining & Machine Learning Researcher | Software Developer | Computer Network Technician**

## SUMMARY OF QUALIFICATIONS

- Trilingual, with over 4 years of intensive research experience in data mining and machine learning
- Ph.D. in Information Systems Engineering and D.Eng. in Software Engineering, with a strong emphasis on optimization algorithms and unsupervised learning models
- Author of multiple high-impact research papers and presenter at international conferences, including ICTAI and GIScience
- Specialized in developing innovative deep learning models for OpenStreetMap data quality assessment and satellite imagery segmentation
- Excellent troubleshooting and network management skills
- Strong collaboration skills, thriving both as a team member and working independently
- Excellent communication, critical thinking and decision-making skills
- Fluent in French, English and Arabic

## TECHNICAL SKILLS

**Operating System:** Windows, Linux

**Programming Language:** Java, Python, C/C++

**Data Science & Machine Learning:** TensorFlow, Keras, scikit-learn, pandas, NumPy

**Web Development:** HTML, CSS, JavaScript, Flask

**Database Management Systems:** Oracle, MySQL, PostgreSQL

**Version Control:** Git, GitHub

**Geospatial Analysis:** Leafmap, Leaflet, Folium

**Big Data:** ETL, PySpark

**Data Visualization:** Matplotlib, Seaborn

## PROFESSIONAL EXPERIENCE

### **Postdoctoral Researcher**

Jan 2022-Sep 2024

*Space Techniques Center, Algerian Space Agency, Algeria*

- Spearheaded the design and construction of Deep Learning models, taking ownership of initiatives to assess and enhance OpenStreetMap (OSM) data quality (3-person team)
- Pioneered the design and training of a bespoke segmentation model on Alsat-2 satellite images for land cover classification, delivering high-precision results (5-person team)
- Authored a comprehensive literature review on cutting-edge models for OSM data quality assessment, providing actionable insights
- Presented a research paper at the flagship conference GIScience 2023, demonstrating the impact of the work on a global stage

### **Computer Science Engineer**

May 2014- Jun 2016

*EHS LES PINS, Algeria*

- Developed Java applications facilitating communication between radiologists and technicians, achieving a 70% reduction in radio film usage and significantly enhancing radiology service quality

- Maintained the hospital information system, ensuring data integrity and improving the system's performance and reliability
- Managed and extended the hospital's local area network, ensuring robust and reliable connectivity

**Computer Science Instructor**

Jan 2014-Mar 2014

*Institute of Management and Enterprise Development of Oran, Algeria*

- Delivered comprehensive courses in Computer Science, Office Automation, and Java programming to a group of 15 students, ensuring a high level of understanding
- Supervised and evaluated student assignments and exams, providing constructive feedback to promote learning and improvement

**Part-time Teaching Assistant**

Jan 2012-June 2012

*University of Science and Technology of Oran Mohamed Boudiaf, Algeria*

- Instructed courses in Visual Basic Application for Excel and Matlab programming to a group of 20 students, fostering a strong foundation in programming skills
- Guided students through complex programming concepts, enhancing their problem-solving abilities and technical knowledge

**EDUCATION**

**Doctor of Engineering in Software Engineering**

Dec 2021

*Wuhan University, China*

- Research conducted on quasi-convex optimization for gradient-based clustering algorithms, resulting in improving the performance of multi-database clustering
- Awarded a fully-funded scholarship to pursue a Doctorate of Engineering in China
- Published two high-quality journal papers and a China Computer Federation conference paper

**Ph.D. in Information Systems Engineering**

Feb 2019

*University of Science and Technology of Oran Mohamed Boudiaf, Algeria*

- Degree evaluated by WES as equivalent to a doctoral degree obtained in Canada
- Defended a thesis on Local Pattern Analysis strategy using graph-based classification algorithms and disjoint forests-based data structures resulting in enhancing the quality of multi-database mining and the decision-making processes
- Received Best Paper Presentation award at the COSI conference for an exceptional presentation
- Published three high-quality journal and conference papers

**TRAINING AND CERTIFICATIONS**

**MOOC in Spatial Data Science: The New Frontier in Analytics**

Nov 2022

*ESRI, Online*

**Deep Learning Specialization**

Jul 2018

*Coursera, Online*

**PyImageSearch Gurus Graduate**

Jun 2018

*PyImageSearch, Online*