Mesroua Cherif

AI Engineer • Machine Learning Engineer • Data Analyst

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Summary

Master's graduate in Artificial Intelligence with strong experience in machine learning, data analysis, and building real-world AI applications. Skilled in handling large datasets, performing statistical analysis, training predictive models, and deploying solutions using Python, PyTorch, Scikit-learn, SQL, and visualization tools. Developed high-impact data-driven systems for well-log analysis, computer vision, and geoscience applications. Experienced collaborating with teams, and delivering reliable solutions. Proficient in data cleaning, EDA, statistical modeling, dashboards, and end-to-end machine learning pipelines (MLOps). Actively seeking roles as an AI Engineer, Machine Learning Engineer or Data Analyst.

Professional Experience

- **AI Software Developer - Collaboration with Sonatrach Research Team (Boumerdes, Algeria / Aug 20-28, 2025)**
  - Coordinated with research and operations personnel to deploy tools and workflows used in oilfield data analysis.
  - Documented technical processes and ensured proper handover of tools, improving team productivity and jobsite efficiency.
  - Provided guidance and training to junior engineers, demonstrating leadership and the ability to support team development.
  - Communicated technical updates clearly to both technical and non-technical stakeholders.
- **AI Research Internship - Sonatrach (Boumerdes, Algeria / Apr 2025 to Jun 2025)**
  - Worked with geologists and field engineers to validate data quality and ensure dataset consistency.
  - Prepared, organized, and processed multi-well datasets, including data cleaning, feature engineering, and handling 30% missing values.
  - Built predictive models (Random Forest, Gradient Boosting) achieving $R^2 > 0.97$ across porosity, shale volume, and water saturation.
  - Diagnosed issues in raw well-log data, contributing to data quality improvement and accurate model outputs.
  - Collaborated in a multidisciplinary environment, strengthening teamwork and communication skills.

Education

- **Master of Science in Artificial Intelligence**
  - *Kasdi Merbah University, (Ouargla, Algeria - Sep 2023 to Jun 2025)*
  - *Thesis: "Depth-Aware Imputation of Missing Well Log Data: A Comparative Study on Algerian Reservoir Data"*
- **Bachelor of Science in Computer Science & Data Science**
  - *Kasdi Merbah University, (Ouargla, Algeria - Sep 2020 to Jun 2023)*

Technical Skills

- **Programming:** *Python, Java, Kotlin, SQL, JavaScript, PHP*
- **Frameworks & Libraries:** *PyTorch, Scikit-learn, Pandas, NumPy, PyQt5, Django, Jetpack Compose, JavaFX, Room*
- **Machine Learning:** *Predictive Modeling, Deep Learning, Computer Vision, Feature Engineering, Data Preprocessing, Statistical Modeling, Model Evaluation, Imputation, Hyperparameter Tuning*
- **Data Analysis & Visualization:** *EDA, Matplotlib, Seaborn, Power BI (basic), Tableau (basic)*
- **Tools & Platforms:** *Jupyter Notebook, Android Studio, Firebase, Gradle, Git/GitHub, Google Colab, Kaggle, REST APIs, XML, JSON, Lasio*

Leadership & Présentations

Hammamet, Tunisia, ISPR 2025 (International Conference on Intelligent Systems and Pattern Recognition)

- **Author & Presenter at ISPR 2025 (Hammamet, Tunisia /Sep 25-27, 2025)**
    - Presented the paper: "Depth-Aware Imputation of Missing Well Log Data: A Comparative Study on Algerian Reservoir Data."
    - Shared research findings with international AI and geoscience experts.
- *Presenter at* **CAIDT 2025 - National Conference on Artificial Intelligence and Digital Technologies (Ouargla, Algeria - Apr 26, 2025)**
    - Delivered a paper on machine-learning-based lithology classification using the FORCE 2020 dataset.
    - Participated in scientific discussions on geoscience data challenges.

Kasdi Merbah University, Ouargla, Algeria University AI Workshop

- *Event Lead at University AI Workshop - Kasdi Merbah University (Ouargla, Algeria - Nov 21, 2024)*
    - Organized a 5-day AI workshop for students and start-ups.
    - Taught sessions on ML fundamentals, project design, and research communication.

Projects

- **Lithology Classification FORCE 2020 Dataset (Jan 2025 to Apr 2025)**
    - Developed lithology classification models using a dataset of 1M+ samples from 118 wells.
    - Achieved 96% accuracy with Random Forest through optimized preprocessing and depth-aware feature handling.
    - Improved model performance by 15% using enhanced missing-data strategies.
    - Documented and presented results to technical audiences, demonstrating strong reporting and communication skills.
- **Computer Vision - Based Attendance System (Nov 2024)**
    - Led the project from design to deployment, demonstrating initiative, ownership, and strong project management.
    - Coordinated with teammates, ensuring task distribution and alignment - reflecting leadership and crew-guidance potential.

Soft Skills

- *Communication & Presentation*
- *Problem-Solving & Critical Thinking*
- *Teamwork & Collaboration*
- *Leadership & Mentoring*
- *Analytical Reasoning*
- *Time Management*
- *Adaptability*
- *Attention to Detail*

Languages

- **Amazigh:** Native
- **Arabic:** Native
- **English:** B2
- **French:** B2