

PROFESSIONAL SUMMARY

Data Scientist with 5+ years of research-to-production experience specializing in time series forecasting and ML engineering. Expert in developing reproducible ML solutions with strong software engineering practices, from statistical modeling to production deployment. Proven track record in translating business requirements into scalable ML systems.

SKILLS

- **ML/AI:** Time Series Forecasting, Deep Learning (Transformers, LSTMs, ANNs), classification Modeling, Statistical Modeling
- **Programming:** Python (Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, XGBoost, LightGBM), SQL (MySQL)
- **MLOps & Deployment:** FastAPI, Docker, CI/CD, Git workflows
- **Visualization:** Matplotlib, Seaborn, Plotly, Streamlit, Dashboards
- **Languages:** Arabic (Native), English (C1), French (B2), Italian (A2: currently learning)

PROFESSIONAL EXPERIENCE

PhD Researcher – Applied Machine Learning

Mohammed V University

Jan 2017–Sep 2021

Rabat, Morocco

- Analyzed complex business requirements autonomously for solar energy forecasting systems, determining ML solution feasibility and developing time series forecasting models that reduced forecast error (nRMSE) by 15%, improving grid reliability for utility partners.
- Built production-ready ML solutions incorporating software engineering best practices, implementing automated data pipelines, reproducible experiment workflows, and model validation frameworks that cut data preparation time by 30% and accelerated testing cycles.
- Designed and optimized artificial neural networks through systematic experimentation, outperforming statistical baseline models by 13.43% while collaborating with engineers to monitor performance in operational environments, enabling more accurate capacity planning and reducing reserve requirements by an estimated 5%.
- Collaborated cross-functionally with Project Noor engineers and communicated ML results to diverse stakeholders, translating complex time series forecasting insights into actionable recommendations through 2 peer-reviewed papers and 3+ international conference presentations.

Mathematics Teacher

Regional Academy for Training and Education

Sep 2017–Aug 2024

Rabat, Morocco

- Delivered clear, engaging math instruction to 1,120+ students, increasing overall class pass rate from 82% to 92%.
- Led training program for 5 peer tutors, coaching them on effective teaching strategies that increased tutoring session attendance by 40% and improved students' first-attempt problem-solving success rate by 25%.

PROJECTS

Rentelligence AI: Dynamic Pricing Engine

End-to-end project - [GitHub](#) | [Live demo](#)

Jan 2025–Apr 2025

Rome, Italy

- Deployed an XGBoost-powered pricing engine in production, enabling on-demand rental price recommendations in minutes instead of days and generating an estimated €50K in annual productivity savings for property managers.
- Engineered 15+ geospatial features from 12,000+ listings, boosting model coverage by 30% and doubling rent-adjustment speed.
- Increased data reliability from 55% to 95%, saving 20 manual hours/week and lifting pipeline throughput by 40%.

Solar Forecasting Pipeline

End-to-end project - [GitHub](#) | [Live demo](#)

Aug 2024–Jan 2025

Rome, Italy

- Built and deployed a Transformer-based solar forecasting pipeline trained on 10+ years of meteorological data, reducing forecast error by 20% and cutting annual grid misallocation costs by an estimated €200K.
- Developed interactive dashboards with FastAPI and Plotly, slashing decision lag by 50% and improving resource planning for energy and property clients.

EDUCATION & CERTIFICATIONS

Master's Degree in Mathematics and Applications, Statistics, and Numerical Computing

Mohammed V University

Rabat, Morocco

IBM Data Science Specialization

Credential ID: W85E3XU7YR5X

Feb 2025

PUBLICATIONS

- "Artificial Neural Networks for Forecasting Solar Irradiance", AIP Conf. Proc. (2018)
- "ANN for One-Day-Ahead GHI Forecasting", SADASC (2018)