

Majid Khoshrou

✉ majid.khoshrou@gmail.com | +31 (0)6 8249 5448

's-Hertogenbosch, The Netherlands

🌐 majidkhoshrou.com | [linkedin.com/in/majid-khoshrou-a2728349](https://www.linkedin.com/in/majid-khoshrou-a2728349) |

🔍 Google Scholar



PROFILE

Data Scientist with 10+ years of experience bridging academia and industry, tackling high-impact challenges in energy, mobility, and infrastructure. My expertise spans machine learning, time series forecasting, NLP, and Generative AI — from optimizing national energy forecasts to building Mr M, a domain-specific AI assistant powered by LLMs and Retrieval-Augmented Generation. I specialize in turning complex, heterogeneous data into clear, actionable insights, designing systems that are not only accurate and scalable, but also explainable and production-ready.

A passionate advocate for open-source innovation, I actively contribute to projects like OpenSTEF and develop independent AI tools for my own platform, majidkhoshrou.com. My work spans diverse domains — including energy systems, robotics, marine science, and decision intelligence — all connected by a commitment to applied, ethical AI that drives measurable societal and business impact.

SKILLS

Programming & ML: Python, SQL, MATLAB, PySpark, Bash, scikit-learn, Pandas, NumPy, TensorFlow, PyTorch, XGBoost, LightGBM, spaCy

Generative AI & LLMs: Retrieval-Augmented Generation (RAG), OpenAI APIs, LangChain, Prompt Engineering, Embedding Pipelines, FAISS Indexing

Data & Cloud Platforms: AWS, GCP, Azure, Databricks, Docker, Git

Analytics & Visualization: Power BI, Tableau, Matplotlib, Seaborn, Plotly

Methods: Time Series Forecasting, NLP, Risk Modeling, Probabilistic Modeling, Anomaly Detection

Collaboration & Management: Agile/Scrum, JIRA, Confluence, Stakeholder Engagement

Open Source: Contributor to [OpenSTEF](#) (Energy Forecasting Library)

Languages: English (Fluent), Dutch (Intermediate), Persian (Native)

WORK EXPERIENCE

Senior Data Scientist, Alliander – Arnhem

Jan 2023 – Present

- Increased day-ahead allocation forecast accuracy by 30%, delivering €1.3M annual cost savings.
- Identified major cost-reduction opportunities via in-depth analysis of energy settlement pricing.
- Enhanced OpenSTEF open-source library, improving usability and model robustness.
- Developed statistical risk models to assess and mitigate grid reliability issues.
- Standardized model validation processes across teams, ensuring consistent performance tracking.

Postdoctoral Researcher, Centrum Wiskunde & Informatica – Amsterdam

Jul 2020 – Dec 2022

- Built accurate EV charging demand forecasts to guide urban mobility infrastructure planning.
- Introduced carbon impact metrics for server clusters, shaping sustainability reporting practices.
- Co-taught graduate-level courses in AI and game theory, improving student engagement and understanding.

Data Scientist, Maistering B.V. – Amsterdam/Rotterdam

Nov 2019 – Jul 2020

- Designed customer segmentation models that improved marketing ROI.

- Delivered ML-powered product features for enterprise clients, enhancing market value.
- Accelerated deployment of analytics pipelines through cross-team collaboration.

PhD Researcher, CWI & TU Delft – Netherlands

Dec 2015 – Nov 2019

- Developed probabilistic forecasting techniques that improved smart grid prediction reliability.
- Created anomaly detection methods to strengthen grid health monitoring.
- Published peer-reviewed research advancing time series analysis in energy systems.

Machine Learning Researcher, C2SR Lab – Porto, Portugal

May 2013 – Oct 2015

- Developed real-time learning algorithms that improved marine robotics navigation efficiency.
- Improved adaptive sampling strategies for more effective ocean mission data collection.

Project Member, EDSAB Co. – Tehran, Iran

Feb 2011 – Feb 2012

- Developed ML models to detect anomalies and potential fraud in national smart meter datasets, improving theft detection accuracy and reducing grid losses.
- Developed long-term energy demand forecasts for national infrastructure planning.

AI PROJECTS

Mr M — Domain-Specific Generative AI Assistant

2025 – Present

- Designed and deployed a personalized AI assistant trained on my own academic and professional materials.
- Built a robust RAG pipeline using OpenAI embeddings and FAISS for semantic search with context-restricted QA.
- Implemented automated text extraction, chunking, and semantic embedding across heterogeneous sources.
- Ensured explainability and trustworthiness through traceable answers linked to original sources.

EDUCATION

PhD in Artificial Intelligence, *CWI and Delft University of Technology*

2015 – 2020

Thesis: “Singular Value Decomposition for Time Series Analysis in Smart Energy Systems”

MSc in Information Engineering, *University of Porto, Portugal*

2012 – 2015

Thesis: “Real-Time Unsupervised Motion Learning for Autonomous Underwater Vehicles”

BSc in Electrical Power Engineering, *Babol Noshirvani University of Technology, Iran* 2002 – 2007

CERTIFICATIONS

- [Google Advanced Data Analytics Certificate](#) (2024)
- [Google IT Support Specialization](#) (2021)
- [Statistics Fundamentals with Python Track](#) (2019)
- [Data Scientist with Python Track](#) (2019)

ADDITIONAL INFORMATION

Work Eligibility: EU citizen (Dutch nationality), also holds Iranian citizenship

Interests: Fitness, photography, travel, museums, technology, chess