DR. RAMIN AHADI

Data Science & Machine Learning

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○ rahadi94

PROFILE

Postdoctoral researcher in **Data Science** at the **University of Cologne (UoC)**, specializing in **machine learning** and **data-driven decision making**. Proficient in developing **AI-based solutions** using **deep learning**, **optimization**, and **Gen-AI**, with applications across **transportation, energy**, and **sustainability**. Strong programming skills in **Python** and **SQL**, with over five years of experience **teaching machine learning theory and applications** at UoC.

EXPERIENCE

Postdoctoral & Data Scientist
University of Cologne (UoC)

📅 May 2025 – Ongoing   ● Cologne, Germany

- Developing **simulation tools** to optimize operations management, such as a **digital twin** for EV charging stations and **agent-based simulations** for urban mobility systems (e.g., Uber in Chicago).
- **Organizing** collaborations and holding workshops with **industry and academic partners**, including Mercedes-Benz, Art-Invest, and DB Energie.
- **Supervising doctoral/master theses**, publishing **scientific journal papers**, and writing **research proposal grants** in EU and national level.

Doctoral Researcher & Lecturer
University of Cologne (UoC)

📅 Oct 2019 – Apr 2025   ● Cologne, Germany

- Applied **advanced machine learning and optimization/mathematical models** to **improve** strategic and operational **decision-making**: e.g., a **multi-agent fleet manager** (15% cost reduction), and a **reinforcement learning pricing model** (10% profit increase for charging/parking facilities).
- Developed **statistical and analytical models** to **predict user behavior** in autonomous vehicle adoption, enhancing acceptance rate by **14%**.
- Teaching assistant for **machine learning**, and **Python workshops**.

Data Engineer – Student Assistant
Impossible Labs–Data Services to Toyota Deutschland GmbH

📅 Oct 2024 – Mar 2025   ● Cologne, Germany

- Streamlined **data pipelines** and applied **statistical** (e.g., **A/B**) tests.

Affiliated Researcher – Part Time
Institute of Energy Economics at the University of Cologne (EWI)

📅 Oct 2019 – Oct 2022   ● Cologne, Germany

- Researched the integration of **smart energy grids** and **electric vehicles**.

PROJECTS

- **Digital twin** of large-scale electric vehicle charging stations (GitHub).
- An end-to-end **Retrieval-Augmented Generation (RAG) assistant** using **LangChain, FAISS, and Streamlit** to enable semantic search and question answering over academic papers (GitHub).
- **Energy demand forecasting** using deep learning models.
- **Fleet management** of shared mobility platforms like Uber (GitHub).
- **Optimizing investment and operations** of charging stations.

EDUCATION

Ph.D. in Data Science
University of Cologne & IE Madrid

📅 2019 – 2025   ● Germany

Thesis: **Operations management of smart cities and infrastructure** using advanced **machine learning** and **analytics**.

M.Sc. in Industrial Eng.
Ferdowsi University of Mashhad

📅 2016 – 2018   ● Iran

B.Sc. in Mechanical Eng.
Ferdowsi University of Mashhad

📅 2012 – 2016   ● Iran

SKILLS & TOOLS

Communication   Team Work

Programming Languages: Python (Expert) –Pandas, NumPy, Scikit-learn, Tensorflow, Pytorch, Simpy– & SQL (Advanced)

Machine Learning Algorithms: Deep/Reinforcement Learning, Transformers, LLMs

Analytics & Visualization: Matplotlib, Seaborn, Power BI

Data: dbt, Airflow, Snowflake

LLM: LangChain, Chromadb

Tools & Platforms: GCP, AWS, Docker, Jupyter, GitHub

LANGUAGES

English (Proficient), German (Intermediate), Farsi (Native)

September 4, 2025