

Edvin Rahnama

Data Scientist & Software Engineer
Python, AWS, Docker, CI/CD, MLOps



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LinkedIn

GitHub

Kiel, Germany

🔗 Portfolio Website

👤 PROFILE

Practice-oriented Data Scientist & Software Engineer with a focus on Machine Learning and MLOps. Specialized in connecting scalable cloud architectures (AWS, Docker) with complex data models. Combines technical depth with solution-oriented thinking to deliver reliable, production-ready systems in interdisciplinary teams. Fluent English (C1) and advanced German skills (B2 actively learning with goal C1).

💼 PROFESSIONAL EXPERIENCE

Jul 2025 – Present
Geesthacht, Germany

Data Scientist, Helmholtz-Zentrum Hereon

Tech Stack: Python (Deep Learning), PINNs/PINO, TensorFlow, NumPy, Git, MLOps.

- **Advanced Deep Learning (PINNs):** Development and implementation of novel physics-informed neural networks (PINNs, PINO, MBAE) for the efficient solution of PDE-controlled systems in materials research.
- **Scientific ML & Optimization:** Execution of complex parameter estimations for corrosion kinetics through data-driven inversion of polarization data, including model validation beyond the standard Tafel range.
- **MLOps & Uncertainty Quantification:** Integration of Uncertainty Quantification (UQ) and versioned configurations into training pipelines to evaluate model uncertainties and ensure experiment reproducibility.

Apr 2025 – present
Preetz, Germany

IT Systems & Automation Engineer, t2consult

Tech Stack: Python, AWS (Lambda, Redshift, CloudWatch), n8n, Flyway, Docker, JavaScript.

- **Data Engineering & Observability:** Conception of robust Python ETL pipelines that aggregate logs from Linux and Windows servers and transfer them to monitoring systems (Zabbix, Grafana, AWS CloudWatch) as well as Data Warehouses (Redshift).
- **Hybrid Automation:** Orchestration of complex workflows using n8n, webhooks, and Python to generate Jira reports – this reduced manual effort by approx. 30%.
- **DevOps & IaC:** Automation of system tasks (e.g., backups, log lifecycle) using AWS Lambda and Bash/PowerShell as well as implementation of GitHub Actions for deployments and Flyway for database migrations.
- **Jira Engineering & Custom Apps:** Development of tailored Jira apps using JavaScript as well as backend integrations to extend platform functionality.
- **Performance & Release QA:** Performance tuning (JVM, SQL) for high-availability data center environments and technical control of app releases (Forge & Data Center) through security checks.

Aug 2023 – Jan 2024
Kiel, Germany

Data Science Project Collaborator, 80s80s Radio GmbH & Co. KG

Tech Stack: Python (NLP), LLMs, APIs (Spotify, Musixmatch), Scikit-learn, Pandas.

- **GenAI & LLM Implementation:** Implementation of Large Language Models (LLMs) and NLP algorithms for targeted personalization of User Experience (UX) and increasing listener interaction.
- **API Data Enrichment:** Building scalable integration pipelines for external music services (Spotify, Musixmatch APIs) to automatically enrich metadata and maximize the quality of recommender systems.
- **NLP Model Engineering:** End-to-end development and optimization of machine learning models for sentiment analysis and text classification as well as tuning data pipelines for more efficient inference times.

Jul 2019 – Nov 2022
Famagusta, Cyprus

Data Scientist, Satrap Investment Group Co.
Tech Stack: Python (Scikit-learn, Pandas), SQL, Predictive Modeling, Time-Series Analysis.
• **Predictive Analytics & Valuation:** Development of machine learning models (Regression, Time-Series) for precise forecasting of real estate prices and market trends to back investment decisions with data.
• **Data-Driven Strategy:** Implementation of analytical strategies to optimize transaction processes, thereby increasing the efficiency of real estate sales and reducing turnaround times.

Jul 2019 – Jul 2021
Famagusta, Cyprus

Assistantship In Information Technology, Eastern Mediterranean University
Tech Stack: System Administration, Network Diagnostics, Linux/Windows, Troubleshooting.
• **System Stability & Troubleshooting:** Conducting systematic error analyses (Root Cause Analysis) for hardware and software disruptions, significantly minimizing downtime.
• **Technical Operations:** Ensuring operational IT availability through proactive maintenance and fast support to optimize Mean Time to Repair (MTTR).

Jan 2017 – May 2019
Tehran, Iran

Web Developer, Ratin Company
Tech Stack: JavaScript (Node.js, Vue.js), PHP, SQL (MySQL), REST APIs.
• **Performance Engineering:** Optimization of backend architecture (Node.js/PHP) and database queries (SQL) for significant reduction of load times (Page Speed) for E-Commerce applications.
• **Technical UX & Scalability:** Technical further development of frontend components using Vue.js to improve User Experience and ensure system stability during high traffic.

EDUCATION

Feb 2018 – Jul 2021
Famagusta, Cyprus

Bachelor of Science in Information Technologies, Eastern Mediterranean University
• **Focus areas:** Machine Learning, Data Visualization, Big Data, Deep Learning, Cloud Computing

Sep 2022 – Dec 2025
Kiel, Germany

Master of Science in Data Science, Kiel University of Applied Sciences
• **Focus areas:** Programming, Databases, Networks, Operating Systems, Software Engineering.

SKILLS

Data & Programming:

SQL (MySQL, Oracle, PostgreSQL), NoSQL (MongoDB), Python (ML/AI, NLP, Scikit-learn, TensorFlow, Django, Flask), JavaScript, Java, PHP, C/C++, R

DevOps & Cloud:

Docker, Linux, Git, AWS Cloud, Grafana, ELK Stack, Nginx, Zabbix, Terraform, Kubernetes, Airflow

BI & Analytics:

Power BI, Data Visualization, Statistics, Basic knowledge of GDPR

LANGUAGES

English – C1 | German – B2 | Turkish | Persian

CERTIFICATES

- Introduction to LLMs in Python ↗
- Introduction to Kafka ↗
- Introduction to Docker ↗
- AWS Cloud Technology and Services ↗
- Power BI for End Users ↗
- Data Driven Decision Making for Business ↗
- Developing AI Models with Machine Learning Clients for SAP HANA ↗
- Introduction to MLflow ↗
- Intermediate Python for Finance ↗