Edvin Rahnama

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

✉ amirhossein.rahnama@outlook.com in 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 (Master Thesis), 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

NLP & Recommender Systems, 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	**Business Intelligence Analyst (Real Estate),** 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	**System Administrator (Working Student),** 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	**Junior Full Stack 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 ⧉