

Koorosh Komeili Zadeh

Junior Data Engineer & Data Platforms Software Engineer

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Work Experience

Data Engineer Intern – TomTom (Sep 2025 – Present)

Built scalable, cloud-native data workflows to enable analytics and decision-making across TomTom in the Map Advanced Analytics Platform Team.

- Designed and optimized **ETL pipelines** processing **TB-scale** geospatial datasets using **Scala**, **Python**, and **Apache Spark** on **Azure Databricks**
- Automated **deployment**, **orchestration**, and **data governance** using **Databricks Asset Bundles**, **Unity Catalog**, and **Azure Data Lake Storage**
- Implemented **data quality checks** and **observability solutions** with **Grafana** for **cost** and **performance monitoring**
- Contributed to **data mesh architecture** initiatives, enabling a **4x improvement** in system **scalability** and **data accessibility** across multiple teams

MLOps and Data Engineer Intern – Diplora B.V. (Jun 2024 – Feb 2025)

Developed **AWS-based** infrastructure for processing **high-frequency** ECG time-series data in production.

- Migrated legacy systems to **cloud-based** solutions and **automated workflows** using **Apache Airflow**, reducing manual processing time
- Implemented **ETL pipelines** using **dbt** and **AWS (S3, Lambda)** for processing thousands of high-frequency ECG data per day
- Deployed a fine-tuned **LSTM** model on **AWS SageMaker**, improving arrhythmia detection by 13%
- Built secure **GraphQL** and **RESTful** APIs with a real-time **dashboard**
- Collaborated with engineers and stakeholders to analyze requirements, **troubleshoot issues**, and implement reliable **data-driven** solutions

Technical Specialist – CS50xIran (Feb 2023 – Aug 2023)

Delivered scientific support for the "Introduction to Programming with Python and Artificial Intelligence" workshops, organized by CS50xIran, a representative of Harvard University CS50 team in Iran.

Teaching Experience

Teaching Assistant – LIACS, Leiden University (Sep 2024 – Present)

Facilitated workshops and troubleshooting sessions, explaining technical concepts and course delivery for **Data Science**, **Software Development**, **Foundations of Computer Science**, and **Introduction to Programming** courses.

Educational Mentor – Leiden University (Sep 2024 – Present)

Mentored Computer Science Pre-Master's and Data Science & AI Bachelor and Minor students, guiding academic planning and technical skill development.

Course Instructor – Amirkabir University of Technology (Oct 2022 – Sep 2023)

Instructor for "Introduction to Python Programming" at the Robotic and Artificial Intelligence Committee

Robotics Lab Assistant – Iran University of Science and Technology (Aug 2022 – Sep 2023)

Lab and Teaching Assistant for the "Introduction to Robotics" course at the IUST Robotics Committee.

Education

Leiden University – BSc in Data Science and Artificial Intelligence (Sep 2023 – Present)

Thesis: Adaptive Data Profiling with AutoML-Based Error Detection for ETL Pipeline Optimization and Monitoring

Delft University of Technology – Minor in Quantum Science and Quantum Information (Sep 2024 – Present)

Tehran Polytechnic University of Technology – BSc in Computer Science (Sep 2022 – Aug 2023)

Completed first year before transferring

Projects

AcciBot - Vehicle Accident Detection Bot

Developed a **cloud-integrated** crash detection system for vehicles using **Arduino** and **Microsoft Azure IoT Hub**.

- Processed real-time sensor data by **Azure Stream Analytics** for quick accident detection
- Integrated **Azure Functions** for serverless processing to enhance accident response time and anomaly detection

Explored Academic Mathematics Performance in Tehran Polytechnic University

A **data-driven** case study of student performance in General Mathematics 1 at Amirkabir University. Utilized **Data Analysis** and **Machine Learning** to uncover trends, predict final grades, and provide insights for academic improvements. [View on GitHub](#)

Skills

Core Competencies Technical communication, cross-team collaboration, mentoring, technical problem analysis

Programming Languages SQL, Python, Java, Scala, Bash/Shell scripting

Libraries & Frameworks Apache Spark, Airflow, Hadoop, Kafka, dbt

Databases PostgreSQL, MongoDB, InfluxDB, Cassandra, DuckDB

Data Warehouses & Lakes Databricks Delta Lake, Azure Synapse Analytics, Snowflake, Google BigQuery

Cloud Platforms AWS (EC2, S3, Lambda, SageMaker), Azure, Google Cloud Platform

DevOps & CI/CD Linux (Ubuntu, CentOS), Git, Docker, Kubernetes, GitHub Actions

Licenses & Certifications

Machine Learning Specialization – Stanford Online (Aug 2023)

Neural Networks and Deep Learning – DeepLearning.AI (May 2023)

CS50x Introduction to Computer Science – Harvard University (Dec 2022)

Advanced Python Programming – Maktabkhooneh (Sep 2022)

Agile project management with Scrum – Amirkabir University of Technology (Dec 2022)