

Koorosh Komeili Zadeh

Graduate Software Engineer – Data, Backend & Cloud Systems

Randstad Area, the Netherlands

 (+31) 6 8782 4064

 kooroshkz

 kkomeilizadeh@gmail.com

 kooroshkz

 kooroshkz.com

Work Experience

Software Engineer Intern – Data Platforms – TomTom (Sep 2025 – Present)

Built scalable, cloud-native backend systems to enable analytics and decision-making across TomTom Map Advanced Analytics Platform.

- Designed **ETL pipelines** for **TB-scale** geospatial data using **Scala, Python, and Apache Spark** on **Azure Databricks**
- Automated **deployment, orchestration**, and **data governance** using **Databricks DABs, Unity Catalog, and Azure Data Lake**
- Implemented **monitoring and observability** solutions for **metrics, logs, costs, and performance** visualization on **Grafana**
- Contributed to **data mesh architecture**, improving **system scalability** by **4x** and **data accessibility** across multiple teams

Software Engineer Intern - Backend & Cloud Systems – Diplora (Jun 2024 – Feb 2025)

Developed backend systems on **AWS** for processing **high-frequency ECG time-series data** in production.

- Built a **real-time data ingestion pipeline** using **Apache Kafka** to stream and buffer ECG signals reliably
- Developed data processing services using **Python** and **Java** with **AWS Lambda**, and **S3**
- Migrated legacy workflows to a **cloud-native AWS architecture**, improving reliability and scalability
- Designed and implemented secure **GraphQL** and **REST APIs** with a real-time **monitoring dashboard**
- Collaborated with stakeholders to analyze requirements, **troubleshoot issues**, and implement reliable **data-driven** solutions

Teaching Assistant – Leiden Institute of Advanced Computer Science (Feb 2024 – Present)

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

Education

Leiden University – BSc in Data Science and Artificial Intelligence (Sep 2023 – Expected Graduation: Jul 2026)

Relevant Coursework: System Design, Object-Oriented Programming, Algorithms & Data Structures, Software Security

Thesis: Adaptive **Data Profiling** using **AutoML models** for data quality monitoring and ETL pipeline optimization

Projects

AcciBot - Vehicle Accident Detection Bot

Developed a **cloud-based backend system** for vehicle crash detection using **Arduino** and **Microsoft Azure IoT Hub**. Processed real-time sensor data using **Azure Stream Analytics** and **Azure Functions** for serverless accident and anomaly detection.

Weather Forecast Monitoring System

Developed an **end-to-end data pipeline** using **Python** and **Apache Airflow** to ingest weather forecasts and live observations, storing **time-series data** in **PostgreSQL** and **Snowflake** to measure forecast accuracy over time.

Explored Academic Mathematics Performance in Tehran Polytechnic University

A **data-driven** case study utilized **Data Analysis** and **Machine Learning** to uncover trends, detect fraud, and provide insights for academic improvements. [View on GitHub](#)

Skills

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|-----------------------|---|
| Programming Languages | SQL, Python, Java, Scala, JavaScript, Bash/Shell scripting |
| Software & Backend | REST APIs, GraphQL, Django, Integration and Unit Testing, Distributed Systems |
| Databases & Cloud | PostgreSQL, MongoDB, DynamoDB, InfluxDB, DuckDB, AWS, Azure, GCP |
| Data & Streaming | Spark, Airflow, Kafka, dbt, MLOps, Databricks, Snowflake, BigQuery |
| DevOps & Tooling | Linux (Ubuntu, CentOS), Git, Docker, Kubernetes, GitHub Actions, CI/CD |

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)

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