Koorosh Komeili Zadeh

Graduate Software Engineer
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Work Experience

Software Engineer Intern – 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** and **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 (Backend & Cloud) Intern – Diplora B.V. (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**, **Java**, **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** with **AutoML-Based Error Detection** for **ETL Pipeline** Optimization and Monitoring

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 by **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, fraud detection and provide insights for academic improvements. View on GitHub

Skills

Programming Languages	SQL, Python, Java, Scala, JavaScript, Bash/Shell scripting
Software & Backend	REST APIs, GraphQL, Django, Object-Oriented Programming, Distributed Systems
Databases & Cloud	PostgreSQL, MongoDB, DynamoDB, InfluxDB, DuckDB, AWS, Azure, GCP
Data Technologies	Spark, Airflow, Kafka, dbt, Hadoop, Databricks, Snowflake, BigQuery, Synapse
DevOps & Tooling	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)

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