Koorosh Komeili Zadeh

Data Science and Artificial Intelligence Student at Leiden University

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Work Experiences

Data Engineer Intern – TomTom (Sep 2025 – Present)

Working in the Map Advanced Analytics Platform Team of the Map Quality & Insights Department, building scalable, cloud-native data workflows to support analytics and decision-making across TomTom.

- Design and optimize **ETL pipelines** with **Python** and **Apache Spark** on **Azure Databricks**
- Automate **deployment**, **orchestration**, and **data governance** using **Databricks Asset Bundles**, **Unity Catalog**, and **Azure Data Lake Storage**
- Implement **data quality checks** and **observability solutions** with **Grafana** for **cost** and **performance monitoring**
- Support **data mesh architecture**, improving **scalability**, **automation**, and **data accessibility**

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

Developed **AWS-based** infrastructure for **ECG time series data processing**.

- Migrated legacy systems to **cloud-based solutions**
- Deployed **LSTM** models on **AWS SageMaker**, improving arrhythmia detection by 13%
- Built secure **RESTful** APIs and a real-time **dashboard**
- Automated **data pipelines** and **CI/CD workflows** on AWS

Technical Specialist – CS50xIran (Feb 2023 – Aug 2023)

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

Teaching Experiences

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

Supported workshops, troubleshooting, and course delivery for **Data Science**, **Software Development**, **Foundations of Computer Science**, and **Introduction to Programming** courses.

Educational Mentor – Leiden University (Sep 2024 – Present)

Mentor for Computer Science Pre-Master's and Data Science & AI Bachelor and Minor programs, guiding students academically.

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 – Jul 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)

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

Projects

Exploring Academic Performance in General Mathematics 1

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. <u>View on GitHub</u>

AcciBot - Vehicle Accident Detection Bot

Developed a **cloud-integrated** crash detection system for vehicles using **Arduino** and **Microsoft Azure IoT Hub**. This project used Azure Functions for serverless data processing and **Azure Stream Analytics** for **real-time data analysis** to enhance accident response time.

Skills

Category	Skills
Soft Skills	Teamwork, Problem Solving, Analytical Thinking, Communication
Technical Skills	Python, Java, C, C++, SQL, Scala, Bash/Shell scripting
Libraries & Frameworks	Apache Spark, Airflow, Kafka, FastAPI, Django, Pandas Seaborn, NumPy, TensorFlow, Keras, PyTorch, XGBoost, OpenCV
Databases	PostgreSQL, MongoDB, InfluxDB, AWS RDS
Data Warehouses & Data Lakes	Databricks Delta Lake, Azure Data Factory, Snowflake, Google BigQuery
Cloud Platforms	Databricks, AWS (EC2, S3, Lambda, SageMaker), Azure, Google Cloud Platform
Tools & Technologies	Linux (Ubuntu, CentOS), Git, Docker, Kubernetes, GitHub Actions, GraphQL, REST API

Licenses & Certifications

Supervised Machine Learning – 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 (Sept 2022)

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