Koorosh Komeili Zadeh

Data Science and Artificial Intelligence Student at Leiden University

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Work Experiences

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

Designed and implemented scalable **Amazon Web Services** cloud infrastructure for **ECG time series data processing** by developing **AI-powered** cardiac monitoring and **real-time cloud-based Signal analysis**.

- Migrated legacy data systems to **cloud-based solutions**, ensuring a smooth transition with minimal disruption to service.
- Deployed and optimized **LSTM Neural Network** models on **AWS SageMaker**, improving arrhythmia detection **accuracy by 13%**.
- Developed secure **APIs** and created a **dashboard** for real-time **data visualization**.
- Designed and automated **data pipelines** and **CI/CD workflows** on AWS for model deployment and monitoring.

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)

Supporting educational activities, including organizing workshops, troubleshooting student issues, assisting with course content delivery, and helping students with programming and theoretical concepts.

- Teaching Assistant for the course "**Data Science**", under the supervision of Dr. Marieke Vinkenoog
- Teaching Assistant for "**Foundations of Computer Science**", under the supervision of Dr. Tobias Kappé
- Assisted Dr. Zhaochun Ren in the course "**Introduction to Programming**"

Educational Mentor – Leiden University (Sep 2024 – Present)

Educational Mentor for Computer Science Pre-Master's and Data Science & AI Bachelor's and Minor programs at Leiden University, providing academic and educational support to students.

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

Instructor for "Introduction to Python Programming" at the Robotic and Artificial Intelligence Committee of the Amirkabir University of Technology scientific association.

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 Iran University of Science and Technology Robotics Committee.

Education

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

The program offers education in computer science, mathematics, and statistics, complemented by advanced studies in machine learning, cognitive science, and artificial intelligence. The curriculum emphasizes the practical application of AI in real-world scenarios and research-driven learning.

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

The minor program focuses on principles of quantum mechanics and their application in quantum computing and information theory.

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. View on GitHub

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, Leadership, Negotiation, Problem Solving, Analytical Thinking, Communication
Technical Skills	Python, Java, R, C, C++, SQL, HTML/CSS/JS
Libraries & Frameworks	NumPy, Pandas, Seaborn, TensorFlow, Keras, PyTorch, Apache Spark, XGBoost FastAPI, OpenCV, Django, BeautifulSoup4, PyQt, Kivy
Databases	PostgreSQL, MongoDB, InfluxDB, GraphQL, AWS RDS
Cloud Platforms	AWS (EC2, S3, Lambda, SageMaker), Azure, Google Cloud Platform
Tools & Technologies	Linux (Ubuntu, CentOS), Git, Docker, MATLAB

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)