

Koorosh Komeili Zadeh

Data Science and Artificial Intelligence Student at Leiden University

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Experiences

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

Diplora is an innovative healthcare technology company developing AI-powered solutions for cardiac monitoring and arrhythmia detection. The cloud-integrated ECG sensor project is designed to continuously monitor patients' heart activity through a wearable device, providing real-time data analysis to alert both cardiologists and patients in case of arrhythmia.

- Designed and implemented scalable cloud infrastructure on **AWS** for ECG data processing, enhancing efficiency in healthcare applications.
- Migrated legacy data systems to cloud-based solutions, ensuring seamless transition with minimal disruption to service.
- Deployed and optimized Neural Network models on **AWS SageMaker**, improving arrhythmia detection accuracy by 13%.
- Developed secure APIs and created a dashboard for real-time data visualization.
- Hands-on experience with **AWS** services, databases, and machine learning in a real-world healthcare setting.

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

Assisting in "Foundations of Computer Science" under the supervision of Dr. Tobias Kappé and 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.

Teaching Assistant – Iran University of Science and Technology (Aug 2022 – Jul 2023)

Teaching Assistant for the "Introduction to Robotics" course at the Iran University of Science and Technology Robotics Committee.

Scientific Team Member – CS50xIran (Feb 2023 – Aug 2023)

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

Education

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.

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.

Amirkabir University of Technology – BSc in Computer Science (1st-Year of Bachelor)

Completed the first year of Bachelor.

Salam High School – Diploma in Mathematics and Physics (2019 – 2022)

- Total Diploma Grade: 19.38 / 20
- Final Physics Grade: 19.75 / 20
- Final Mathematics AVG (Geometry, Calculus, Discrete): 19.5 / 20

Projects

Exploring Academic Performance in General Mathematics 1

A data-driven case study of student performance in General Mathematics 1 at AmirKabir University. Utilized Python 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 crash detection system for vehicles using Arduino and various sensors, integrated with AI for real-time accident detection and emergency response automation. Leveraged **AWS IoT Core** to securely connect and manage sensor data in the cloud, and **AWS Lambda** for serverless processing of incoming data. The system is designed to speed up the golden hour response by sending real-time reports, including sensor data and live location, to emergency centers via **AWS SNS** (Simple Notification Service), ensuring timely alerts and faster decision-making.

Skills

Team Work and Leadership

Negotiation

Analytical thinking

Public Speaking

Problem Solving

Creative Thinking

Communication and Networking

Programming Languages

Python: ★★★★★☆

Java: ★★★★★☆

C++: ★★★★★☆

C: ★★☆☆☆☆

HTML/CSS/JS: ★★★★★☆

Libraries & Frameworks

NumPy, SciPy, Pandas

Matplotlib, Seaborn

TensorFlow, Scikit-learn

Django, BeautifulSoup4

Cloud Platforms & Tools

AWS (EC2, S3, SageMaker, Lambda, RDS)

Terraform, AWS CloudFormation

CloudEndure, AWS Migration Hub

Database Skills

PostgreSQL

MongoDB

InfluxDB

GraphQL

AWS RDS

Languages

Persian: ★★★★★★

English: ★★★★★☆

Dutch: ★☆☆☆☆☆

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)

Hobbies

Podcast, Tennis, Chess, Board Games, Photography

Activities

Factfulness Podcast – Review of the Factfulness book by Hans Rosling (Farsi)

YouTube Channel – Financial Markets and Trading Strategy guides