Sally Mohammadzadeh



Computer Engineering Student · Applied AI and Data

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Profile

Computer Engineering student who builds AI and data projects, from computer vision to data pipelines. Passionate about AI and data engineering, with a particular interest in robotics and space technology.

Experience

Applied AI Engineer, DIANA Student Robotics Team — Oct 2023 – Jan 2026

- Built the **computer vision pipeline** for the rover's **object-detection** task.
- Contributed to the team's **4th place out of 126** at the European Rover Challenge (ERC) 2025.
- Collected field images of the probe, annotated them in CVAT and applied **data augmentation**.
- Trained a **YOLOv8** probe-detection model on the annotated dataset using **PyTorch**.
- Built an inverse-kinematics simulation in MATLAB/Simulink for a 6-DoF arm used to collect detected probes.

Projects

SpaceX Launch Data Pipeline, personal project — 2026
github.com/sallyze/spacex-pipeline

- Designed a **4-stage Python pipeline**: collect, clean, store, display.
- Collected data from a public **REST API** and cleaned it with **Pandas**.
- Stored data on **205 launches** in two **PostgreSQL** tables using SQLAlchemy.
- Ran the database using **Docker Compose** for a repeatable setup.
- Built a **Streamlit dashboard** showing annual launch counts and successful launches from 2006 to 2022.

Triple DES (3DES) Encryption in Pure Python, university project — 2025
github.com/sallyze/cryptography-Triple-DES

- Implemented 3DES encryption and decryption from scratch in Python, with no external libraries.
- Implemented the S-boxes and Feistel network, added ECB mode, and wrote a technical report.

Education

BSc in Computer Engineering, Politecnico di Torino, Turin — Sep 2027 (expected)

- Relevant coursework: Databases, Algorithms & Data Structures, Object-Oriented Programming, Computer Architecture, Cybersecurity, Computer Networks, Mathematics, Algebra

Diploma in Experimental Sciences, NODET (Merit-Selective School) — 2023

- High school diploma · Grade: 19.67/20 (98.35%)

Skills

Programming & Data: Python, C, SQL, PostgreSQL, SQLAlchemy, MATLAB/Simulink
AI & Computer Vision: Claude API, PyTorch, YOLOv8, OpenCV, NumPy, Pandas, CVAT
Tools: Docker, Streamlit, REST APIs, Git/GitHub, Linux CLI, Word, Excel, PowerPoint
Languages: Italian (B1, studying), English (C1, IELTS 7.0), Persian (native), Azerbaijani (C1)

Certifications

Building with the Claude API, Anthropic, May 2026
SpaceCert, European Space Foundation, Sep 2025
ERC Space & Robotics Industry Standard, European Rover Challenge, Sep 2024