

Salma Mohammadzadeh

Computer Engineering Student | AI & Data Engineering Intern

Email: salma.mozad@gmail.com | Phone: +39 340 196 2592 | Location: Torino, Italy
Portfolio: salmaze.dev | LinkedIn: linkedin.com/in/salmaze | GitHub: github.com/salmaze



Summary

Computer Engineering student at Politecnico di Torino, seeking an internship in AI or data engineering. Contributed to a 4th-place finish out of 126 teams at ERC 2025 as computer vision engineer, and independently built a Dockerized ETL pipeline ingesting live SpaceX data into PostgreSQL with a Streamlit dashboard. Comfortable stepping into unfamiliar problems and delivering end-to-end — from first prototype to working system.

Education

Politecnico di Torino

Bachelor of Computer Engineering

Sep 2022 - Present

Torino, Italy

- Relevant Coursework: Introduction to Databases, Cybersecurity, Computer Science & Programming Techniques, Computer Architecture, Algorithms & Data Structures, Object Oriented Programming

Experience

Computer Vision Engineer

DIANA Student Robotics Team

Oct 2023 - Present

Politecnico di Torino

- Contributed to DIANA's 4th-place finish out of 126 teams at European Rover Challenge (ERC) 2025
- Built an end-to-end YOLOv8 object detection pipeline for probe detection: field data collection, annotation and quality control in CVAT, dataset augmentation, and model training in Python with OpenCV
- Collaborated within a multidisciplinary team of engineers, coordinating the CV workstream while staying aligned with mechanical and software subsystems under competition deadlines
- Picked up MATLAB and Simulink independently to support rover arm inverse kinematics simulation

Projects

SpaceX Launch Data Pipeline

Personal Project | Source: github.com/salmaze/spacex-pipeline

2026

- Built a 4-stage ETL pipeline ingesting 205 SpaceX launches from a public REST API, transforming and aggregating with Pandas, and persisting across two relational tables in a Dockerized PostgreSQL 15 database
- Delivered a live Streamlit dashboard querying Postgres directly, displaying KPI metrics and per-year launch success charts — full stack spins up with a single docker compose up
- Entirely self-taught and self-directed: chose the problem, designed the architecture, and shipped it end-to-end out of genuine curiosity about space exploration data

Triple Data Encryption Standard (3DES) Encryption

University Project | Source: github.com/salmaze/cryptography-Triple-DES

2025

- Implemented full 3DES encryption and decryption from scratch in pure Python with zero external libraries, building all core cryptographic primitives: S-boxes, Feistel structure, Initial/Final Permutations, and 48-round key scheduling across three independent keys
- Includes Electronic Codebook (ECB) mode, optional Public-Key Cryptography Standards (PKCS)-style padding, and a written technical report

Skills

- **Technical:** Python, C, SQL, MATLAB, Simulink, PyTorch, NumPy, Pandas, YOLOv8, OpenCV, CVAT, Git, GitHub, Docker, PostgreSQL, data visualization, Streamlit, REST APIs
- **Languages:** Persian (Native), English (C1 – IELTS Band 7), Azerbaijani (C1), Italian (A2 – Learning)

Certifications

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