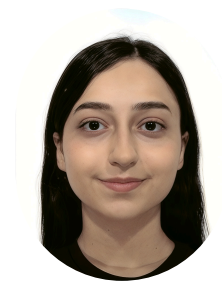


Salma Mohammadzadeh

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Summary

Computer Engineering student at Politecnico di Torino with proven experience across data pipelines, computer vision, and systems programming — from building ETL pipelines with PostgreSQL to deploying YOLOv8 object detection for a competitive robotics team (4th / 126 teams, ERC 2025). Comfortable across the full stack from data ingestion to visualization. Looking to contribute to meaningful engineering work through an internship.

Education

Politecnico di Torino

BACHELOR OF COMPUTER ENGINEERING

Torino, Italy

2022 - Present

- Relevant Coursework: Introduction to Databases, Cybersecurity, Computer Science & Programming Techniques

Experience

DIANA Student Robotics Team

COMPUTER VISION & ROBOTICS ENGINEER

Politecnico di Torino

2023 - Present

- 4th place out of 126 teams — European Rover Challenge 2025
- Built a computer vision pipeline for geological probe detection using YOLOv8, personally handling image collection, annotation, dataset organization, and model training in Python
- Prepared the training dataset through a mix of manual collection, sourced imagery, and augmentation techniques
- Supported rover arm kinematics simulation using MATLAB and Simulink alongside the main CV workstream

Projects

SpaceX Launch Data Pipeline

GITHUB.COM/SALMAZE/SPACEX-PIPELINE

2026

- Designed and built a 4-stage ETL pipeline ingesting 205 SpaceX launches from a public REST API, transforming and aggregating the data with Pandas, and persisting it 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 — entire stack spins up with a single command via Docker Compose

Triple DES Encryption

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
- Built for a university Cybersecurity course; includes ECB mode, optional PKCS-style padding, and a written technical report

Skills

Languages

Persian (Native) English (Native) Azerbaijani (C1) Italian (A2)

Programming

Python SQL C MATLAB

Tools & Platforms

Git GitHub Docker PostgreSQL Streamlit Simulink

ML & Data

YOLOv8 EasyOCR Pandas OpenCV CVAT Roboflow

Concepts

REST APIs ETL Pipelines Object Detection Cryptography Prompt Engineering

Certifications

Sep 2024 **ERC Space & Robotics Industry Standard**, European Rover Challenge

Sep 2025 **SpaceCert**, European Space Foundation

Ongoing **Building with the Claude API**, Anthropic