

# Mattia Carlino

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Göteborg, Sweden | Turin, Italy

[github](#) | [linkedin](#)

## EDUCATION

### Master of Engineering - Computer Engineering (AI & Data Analytics)

Politecnico of Turin

Sep 2023 - Current

Turin, Italy

### Bachelor of Engineering - Computer Science

University of Turin

Sep 2019 - Nov 2022

Turin, Italy

## SKILLS

#### Programming Languages

Python | Java | C | Rust | JavaScript

#### Cloud & DevOps Technologies

Docker | Kubernetes | Terraform | Microsoft Azure | Jenkins

#### Machine Learning & AI Frameworks

PyTorch | OpenCV | CNN | RNN (LSTM, GRU) | LLMs

## EXPERIENCE

### Chalmers University, Vehicle Safety Department

Jan 2025 - Current

Thesis Project – Crash Data Analysis with LLMs

Göteborg, Sweden

- Developed a pipeline leveraging Large Language Models to extract structured information (e.g. travel direction, collision type) from crash summaries in the CISS dataset.
- Implemented advanced prompting strategies (few-shot, chain-of-thought, self-consistency) and built evaluation tools tailored to low-supervision scenarios.
- Integrated Retrieval-Augmented Generation (RAG) to inject domain-specific knowledge (definitions and case-based examples) into LLM prompts and performed fine-tuning of open-source models.

### Lutech Group (formerly Certimeter Group)

Nov 2022 - Oct 2023

Cyber Security Specialist

Turin, Italy

- Managed IAM infrastructure for a major banking institution (UniCredit S.p.A.), ensuring secure, compliant access aligned with enterprise security policies.
- Implemented and maintained identity solutions using Microsoft Azure, Azure Active Directory (AAD), and on-prem Active Directory (AD).
- Utilized Splunk Enterprise for real-time monitoring, auditing, and threat detection.

### Lutech Group (formerly Certimeter Group)

Jun 2022 - Nov 2022

Cloud Architect Intern

Turin, Italy

- Built an automated deployment solution for a microservices-based application in the cloud, following DevOps best practices to improve scalability and reliability.
- Managed cloud infrastructure using Terraform (IaC), enabling consistent and scalable deployments.
- Designed CI/CD pipelines with Jenkins and JFrog, automating build, test, and release workflows.
- Deployed and orchestrated containerized services with Docker and Kubernetes on Microsoft Azure, leveraging its native monitoring and management tools.

## NOTABLE PROJECTS

### CNN-Based Vehicle Window Detection for Airbag Optimization

Nov 2024 - Jan 2025

Chalmers Tracks course in collaboration with Autoliv.

Chalmers, Sweden

- Built a deep learning system to extract vehicle window geometries from side-view images, supporting airbag safety design.
- Designed and implemented a CNN-based image segmentation pipeline (ResNet) to detect and extract window structures from vehicle images.
- Focused on enabling data-driven optimization of airbag deployment strategies based on real-world car geometries.
- Leveraged PyTorch for model development and OpenCV for pre-processing and post-processing tasks.

### Image Captioning with CNN-RNN Architectures – Deep Learning Project

Sep 2024 - Nov 2024

Chalmers Deep Machine Learning course

Chalmers, Sweden

- Developed an image captioning system combining CNN and RNN architectures to generate textual descriptions from images.
- Extracted visual features using pretrained CNNs (ResNet50, ViT) and generated captions via RNNs with GRU/LSTM variants.
- Integrated an attention mechanism to improve context-aware word generation, and experimented with advanced models like Microsoft's GIT.