

# Nicola Lorenzon

Zürich, Switzerland

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## Education

### ETH Zürich - Eidgenössische Technische Hochschule Zürich

Zürich, Switzerland

SEMP EXCHANGE STUDENT

Sep 2024 - Feb 2025

- *Master Thesis*: Selected as the sole student from the University of Padova (UniPD) for an exchange at ETH Zurich. Conducting a Master's thesis in Natural Language Processing at Rycolab, supervised by Professor Ryan Cotterell.

### UniPD - University of Padua

Padua, Italy

MSC IN COMPUTER ENGINEERING (ARTIFICIAL INTELLIGENCE & ROBOTICS)

2022 - present

- *GPA*: 110/110 with honors (29.75/30)
- *Thesis*: Expressivity of In-Context Learning in Large Language Models

### UniPD - University of Padua

Padua, Italy

BSC IN COMPUTER ENGINEERING

2018 - 2021

- *GPA*: 108/110
- *Thesis*: Loss Function for Image Segmentation [\[link\]](#).

## Work Experience

### ETH Zürich - Eidgenössische Technische Hochschule Zürich

Zürich, Switzerland

SCIENTIFIC ASSISTANT INTERN

Feb. 2025 - May 2025

- Performed research in Natural Language Processing and Formal Language Theory, focusing on the expressivity and computational properties of neural networks and large language models, leading to two submissions under review and one manuscript in preparation.

### Noovle S.p.A.

Milan, Italy

CLOUD DATA ENGINEER - BUSINESS INTELLIGENCE ENGINEER

Dec. 2021 - Oct. 2022

- Led a team of five engineers to implement from scratch an ETL pipeline for a major Italian bank on Google Cloud Platform (GCP).
- Developed multiple Cloud Composer DAGs to orchestrate data flows and integrated a Python-based alert system for data quality monitoring.
- Deployed Looker dashboards used daily for cost analysis and forecasting, enhancing decision-making efficiency for the client.

### Social Thingum

Milan, Italy

SOFTWARE ENGINEER INTERN

Sep. 2021 - Dec. 2021

- Configured a MySQL database and deployed a complete e-commerce website using XAMPP.
- Developed a binary classification model for food data using Python, improving data processing efficiency by 12%.

### I.P.S.I.A. DELLA VALENTINA - PNRI00602X

Sacile, Italy

FULL TIME TEACHER

Feb. 2021 - Jul. 2021

- Taught Electrical and Electronic Science and Technologies to a class of 25 high school students, developing lesson plans and hands-on labs to facilitate practical learning.

## Projects

### Lead The Future (volunteering)

PYTHON

- Selected (1 of 10) by LTF to contribute as a volunteer to the development of a chatbot aimed at scaling their systems.

### FoodSight (€11.644 GRANT)

PYTHON, OPENCV

- Won a €11.644 grant [\[link\]](#) from the University of Padova for innovative project. Currently developing a Computer Vision system to monitor and predict food consumption and food waste in canteens. The project aims to promote sustainability, quality and customer satisfaction.

### RAG: UniPD Academic Assistant

PYTHON, HUGGINGFACE

- Built a Retrieval-Augmented Generation (RAG) system for answering students' questions about the Computer Engineering curriculum at UniPD. Developed dataset by scraping the university website and performed model selection to optimize performance [\[link\]](#).