

# Elia Parolari

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Nationality: Italian

## Education

- 2024 - Present **MSc in Physics of Complex Systems**, Politecnico di Torino, Sissa, ICTP, Université Paris Cité, Sorbonne Université, Université Paris-Saclay, IT, FR.
- **Relevant subjects:** Statistical Physics, Disordered Systems, Algorithms for Optimization and Inference, Machine Learning, Stochastic Processes, Data Science, Dynamical Systems.
  - **Current GPA:** 28.5/30.
- 2021 - 2024 **BSc in Mathematical and Computing Sciences for Artificial Intelligence**, Università commerciale Luigi Bocconi, Milano, IT.
- **Relevant subjects:** Algebra and Analysis, Statistics, Probability, Computer Science, Data Science, Optimization, Machine Learning, Deep Learning, Decision Theory, Game theory, Financial Mathematics.
  - **Final grade:** 110/110.
  - **Associations:** Team leader at the Bocconi Data Science Student Association.

## Internships and Experiences

- 2024 - 2025 **Data Analytics Research Project**, Saba Forging, Remote
- Classified company articles (metal components used in agricultural machinery) by values using Recency, Frequency, Monetary (RFM) analysis, linear trend analysis, and the Croston method for forecasting.
- 2023 - 2024 **Team Leader - Customer Segmentation Project**, Bocconi Statistics and Data Science Student Association, Milano, IT
- Led a project on customer segmentation using unsupervised learning and NLP on transactional data, identifying user clusters with similar spending patterns to support targeted marketing strategies.
- Summer 2023 **Computer Vision Engineer Intern**, Polytec, Borgo Chiese, IT
- Gained end-to-end experience on production-line robots: camera and lighting setup and calibration, data collection, computer vision algorithm development (classical CV and convolutional networks), software integration, and testing.

## Skills

**Languages:** Italian (Mother tongue), English (Fluent).

**Programming and Tools:** Python, HTML, CSS, LaTeX.

**Libraries:** Pandas, Scikit-learn, PyTorch, Statsmodels.

## Academic Projects

- Monte Carlo Method heuristics for random K-SAT problems. ⚡
- Deep learning for breast cancer detection in ultrasound images. ⚡
- Computational analysis of neuronal responses to visual stimuli in mice. ⚡
- Unsupervised learning based customer segmentation on transactional data. ⚡
- Machine learning for predicting oxygen deficiency in cancer cells from high-dimensional gene expression data.
- Dynamical system implementation of Hodgkin-Huxley neural network.

## Others

- Summer jobs Tourist receptionist, product photographer, waiter, private tutor (mathematics and physics).  
Hobbies Hiking and fishing.