RICCARDO CORTE

Master Student — Physics of Data

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⌂ https://github.com/riccorte   🌐 https://riccorte.github.io/

SKILLS

Programming

Python (advanced)   C++   R

MySQL   Dask   Spark

Visual Basic   LaTeX   Jupyter

GitHub

Machine Learning & AI

Neural Networks   RBMs

Transformers   LLMs (GPT-2)

Frameworks

PyTorch   TensorFlow   Keras

Scikit-learn   NumPy   Pandas

Matplotlib   Seaborn

Data Analysis

Multidimensional Analysis

Statistical Modeling

Bayesian Inference   Time Series

Math & Physics

Linear Algebra   Optimization

Probability & Statistics

Stochastic Processes

Information Theory

Modeling & Simulation

Leadership

International collaboration

Student Association President

LANGUAGES

English — C1 (CAE)

Spanish — B2 (EU test)

AWARDS

05/2018 Silver Medalist
Italian Logic Games

PROFILE

If I had to describe myself in a single word, it would be grit. I am a Physics graduate and MSc student with a logical mindset, capable of applying advanced theoretical knowledge through programming and scientific problem solving. What sets me apart is the perseverance and passion I demonstrate until I achieve my goals. From the very beginning of a project, I can develop a clear strategy and follow it with determination. I enjoy tackling complex challenges by combining academic knowledge and creativity, supported by resilience and adaptability. My goal is always to exceed expectations, contributing effectively in both technical and collaborative contexts.

EDUCATION

Master's degree in Physics of Data

Università degli Studi di Padova

📅 09/2024 – Present   ⚲ Padova, Italy

- Projects on advanced machine learning.
- Participation in international collaboration on cutting-edge technologies, including Large Language Models (LLMs).

Bachelor's Degree in Physics

Università Degli Studi di Trieste

📅 09/2021 – 09/2024   ⚲ Trieste, Italy

- Founded and presided over a student association.
- Erasmus exchange and elected member of student council.
- Competitive running athlete alongside academic commitments.

PROJECTS

Mean Reversion Metric on Financial Dataset

XSOR Capital Collaboration

- Developed self-trading bot using mean reversion on financial time series.

Hyper-parameters and Energy Structure

RBMs

- Energy analysis of RBMs with hyperparameter optimization.
- Exploration of hidden spaces via PCA, t-SNE, clustering.

Transformer Architecture

GPT-2 Model

- In-depth analysis of embedding transformations.

Award reached both individually and as the captain of a wonderful team.

INTERESTS

Endurance Athlete — My Resilience and Perseverance are demonstrated in the context of Sportive events. I ran the 2024 Rome marathon as well as multiple half-marathons. Ended up fourth in my cathegory at the 2023 Trieste Half Marathon.

- Studied attention mechanisms and feed-forward networks.

PERSONAL WEBSITE

All the projects described above, along with additional work on time series analysis and VBA-based market studies, are organized and stored for reference in my personal website. 🌐 https://riccorte.github.io/