

# LORENZO DE SIMONI

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## EDUCATION

**M.Sc in Statistics and Data Science**, *Università degli studi Milano-Bicocca* 10/2023-Present | Milan, Italy  
· **Relevant Courses:** Stochastic Processes, Machine Learning, Statistical Learning, Bayesian Statistical Models, Advanced Statistics, Data Mining, Microeconometrics, Economics for Data Science, Computational Statistics, Spatial Statistics.

**B.Sc in Statistical Sciences**, *Università degli studi di Padova* | Padova, Italy  
· **Relevant Courses:** Statistics, Statistical Inference Theory, Probability, Database, Processing Systems, Analysis of Time Series, Multidimensional Data Analysis.  
· **Dissertation:** "*Time Series Analysis of milk sales, in collaboration with Ali S.p.A.*"- I worked with a supermarket company to analyze multivariate time series of milk sales. Supervisor: Prof. L. Bisaglia.

**Scientific Diploma**, *Gymnasium Patavinum High School* 09/2011 - 06/2016 | Padova, Italy

## WORK EXPERIENCE

**Cashier and Shop Assistant**, *Ali Spa* 06/2019 – 06/2023 | Padova, Italy  
· Worked full time during my Bachelor's degree as a cashier and logistics assistant in a large retail outlet.  
· Gained experience in customer service, cash register operations, inventory handling, and ability in team working.  
· Used internal company software for cashier management, transaction recording, and daily closing operations.  
· Collaborated with the company on my Bachelor's dissertation, conducting a multivariate time series analysis on milk sales.


## PROJECTS

**Lab Data Challenge – STMicroelectronics Collaboration**, *Python, R* 05/2024 – 06/2024 | Milan, Italy  
· Participated in an intensive data science challenge in collaboration with **STMicroelectronics**, aimed at solving a real-world industrial classification problem.  
· Built and validated a classification model based on a complex industrial dataset, gaining hands-on experience in data preprocessing, modeling, and evaluation using Python and R.  
· Worked in a team environment and presented the results directly to the company's Technical Director, Danilo Pietro Pau.  
**in**

**Other Projects**, *R Studio*

- **Student Stress Classification** – Collaborated on a classification problem to predict students' stress levels using SVM, Neural Networks, and Decision Trees. 🔗
- **Football Player Value Forecasting** – Built predictive models to estimate the financial value of football players using Statistical Learning algorithms like bagging, boosting, random forest, and neural networks. 🔗
- **Stock Option Prediction with Bayesian Models** – Compared several Bayesian models to forecast stock options using the **bsts** package. I used dynamic regression models to compare classic and Bayesian approaches. 🔗
- **Housing Price Prediction – Milan** – Developed a supervised learning model in R to estimate real estate prices in Milan. I applied data cleaning, feature engineering, model selection, and comparison using Linear Regression, LASSO, and Random Forest, evaluating performance with MAE and cross-validation. 🔗
- **Vinho Verde Wine Analysis** – Performed principal component and factor analysis to study consumer perception of Vinho Verde wine quality. 🔗


## IT SKILLS

- **Programming Languages:** Python, R, Java, SQL
- **Statistical and Data Analysis Tools:** Rstudio, STATA, SPSS, SAS (Certified)
- **Machine Learning Libraries:** PyTorch, caret, glmnet, randomForest, xgboost, Tensorflow, OpenAI API, LLMs
- **Data Visualization:** ggplot2, matplotlib, tidyverse
- **Database and Query:** MySQL
- **Development and Environments:** Eclipse, VS Code, Git, GitHub
- **Certifications:** Lean Six Sigma White Belt, SAS Certified Specialist: Base Programming Using SAS 9.4 

## PERSONAL INTERESTS

- **Academic Interests:** Machine Learning, Forecasting Models, Bayesian Statistics, Feature Engineering, and Explainable AI.
- **Sports & Hobbies:** Football, Tennis, Music, and Travel.

## LANGUAGES

- **Italian:** Native
- **English:** Fluent, B2 
- **Spanish:** B1