MATTEO DIMAI

Personal data:

Residence: Omissis
Phone: Omissis
E-mail: Omissis
LinkedIn: Omissis

Work experience:

Senior data scientist   **(2024-present)**   **Enetra d.o.o.**
- Development of mathematical models for electricity production and load.
- Development and optimization of trading algorithms in Python (numpy/Pandas/scikit-learn): increased trading profitability by 100 basis points in first 60 days.
- Authored comprehensive reports in Tableau, maintained and improved data pipelines from MongoDB and PostgreSQL.

Statistician/Data scientist   **(2008-2024)**   **Friuli Venezia Giulia regional government**
- Played a key role in shaping regional government strategy through advanced statistical analysis for strategic planning.
- Led the construction of data pipelines and authored comprehensive reports in Oracle BusinessObjects, showcasing expertise in data visualization and reporting.
- Engineered algorithms in R for efficient sampling, data analysis, and model building, demonstrating a data-driven approach to decision-making.
- Published groundbreaking research on policy evaluation modeling using advanced statistical methods (Springer Genus, 2023).
- Developed demographic forecasting models and implemented innovative data cleaning methods for improved data quality.
- Designed and implemented robust sampling schemes, supporting data collection, analysis, and internal audit procedures.

Statistical specialist   **(2018-2019)**   **Hattrick Ltd.**
- Created a team ranking system for the online football manager game Hattrick.org
- Developed a customized rating system based on ELO ratings, tailored to the unique context of the game.
- Performed calculation of approximate expected values of nested stochastic processes, integrating them into the game code.
- Utilized various data analysis methodologies, including simulation, generalized linear models, regression trees, and custom dissimilarity measures, in Python and R.

Contract professor   **(2008-2021)**   **University of Trieste**
- Instructed ~40 students per year in descriptive statistics for Statistical and actuarial science students (2008-2019).
- Instructed 150+ students per year in descriptive statistics, probability calculus and inferential statistics for Economics students (2016-2021).
- Development of R – Shiny applications to facilitate statistical learning for high school and junior students.

Statistician   **(2006-2007)**   **Wego s.r.l.**

- Developed hierarchical Bayesian models in Python, R and C based on matrix factorization (Latent Dirichlet Analysis, an upgrade of PCA) to classify unstructured textured data by topic, cluster analysis (KMeans) by topic and automatic classification by topic
- Received the 2007 InnovAction prize for the most innovative companies in the Friuli Venezia Giulia region for the project of a smart search engine on administrative procedures data on which the Master thesis was based on

Education:

PhD – Circular economy (excellent mark)

Research area:	Mortality modelling
From:	November 2021
Completion:	March 2025
University:	University of Trieste, Faculty of Economics

Master of Sciences – statistical and actuarial science (110/110 cum laude)

Title:	Master of statistical and actuarial sciences
From:	September 2005
Graduation:	July 2007
University:	University of Trieste, Faculty of Economics

Bachelor of Science – statistics and computer science (110/110 cum laude)

Title:	B.S. in business statistics and computer sciences
From:	September 2002
Graduation:	July 2005
University:	University of Trieste, Faculty of Economics

Publications:

- Dimai, M. Clustering of mortality paths with the Hellinger distance and visualization through the DISTATIS technique. Stat Methods Appl (2025). https://doi.org/10.1007/s10260-024-00770-0
- Dimai, M., & Brabec, M. (2024). A Bayesian model for age at death with cohort effects. Demographic Research, 51, 1017–1058. https://www.jstor.org/stable/48797810
- Dimai, M. Multi-population mortality modeling with economic, environmental and lifestyle variables. Qual Quant 59 (Suppl 1), 153–205 (2025). https://doi.org/10.1007/s11135-024-01971-1
- Dimai, M. Modeling and forecasting mortality with economic, environmental and lifestyle variables. Decisions Econ Finan (2024). https://doi.org/10.1007/s10203-024-00434-4
- Dimai, M. Shall we have another? Effects of daycare benefits on fertility, a case study in a region in Northeastern Italy. Genus 79, 13 (2023). https://doi.org/10.1186/s41118-023-00194-w
- Dimai, M., Torelli, N. (2010). Clustering Textual Data by Latent Dirichlet Allocation: Applications and Extensions to Hierarchical Data. In: Palumbo, F., Lauro, C., Greenacre, M. (eds) Data Analysis and Classification. Studies in Classification, Data Analysis, and Knowledge Organization. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-03739-9_28

Language abilities:

Language	Written comprehension	Oral comprehension	Written expression	Oral expression
Slovenian	Mother tongue	Mother tongue	Mother tongue	Mother tongue
Italian	Mother tongue	Mother tongue	Mother tongue	Mother tongue
English	Excellent	Excellent	Excellent	Excellent
Croatian	Very good	Very good	Very good	Very good
German	Intermediate	Basic	Basic	Basic
Russian	Basic	Basic	Basic	Basic
Ukrainian	Basic	Basic	Basic	Basic
Swedish	Basic	Basic	Basic	Basic

Skills:

- Data Analysis and Modeling: Multivariate Analysis, Spatial Cluster Analysis, Time Series Analysis, Policy Evaluation Modeling, Sampling Techniques, Machine Learning, Data Cleaning and Imputation
- Statistical Software: Advanced R, Advanced Excel, Intermediate SQL and Database Management, Python
- Data Visualization (Oracle BusinessObjects, R ggplot2)
- Personal: Strong Problem-Solving Skills, Excellent Communication, Public Speaking, Mentoring, Interdisciplinary Collaboration

Interests:

Technical problem-solving, systems thinking, open-world games, board games, science, technology, language study, and continuous learning.