

Daniele Melotti

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SKILLS

- **Programming Languages:** Python (NumPy, Pandas, Scikit-learn, matplotlib), R (tidyverse, rpart), SQL.
- **Technical Skills:** Data Wrangling, Probability, Computational Statistics, Hypothesis Testing, SEM, Regression, Classification, Decision Trees, Clustering, PCA, Recommendation Algorithms, Ensemble Methods.
- **Tools:** Git, GitHub, GitLab, Jira, GCP.
- **Languages:** English (proficient), Italian (native), Polish (fluent), Chinese (conversational).

WORK EXPERIENCE

Software Developer (*remote*)

Oct 2023 - Present

CEMTA

Hsinchu, Taiwan

- Developed key components of an OCR and translation application designed for translating Chinese menus to English, leveraging Google Cloud Platform's APIs.
- Collaborated in a remote team of 4, contributing to project planning, system architecture and tech stack choice and implementation.

Research Assistant

Sep 2022 - Jul 2023

National Tsing Hua University

Hsinchu, Taiwan

- Theorized and created two measurement invariance techniques on the basis of MICOM, providing more robust results and drastically reducing the computational time to less than 1 second.
- Conducted research on the application of different PLS-SEM algorithms for market segmentation, contributing to detailed comparisons and further understanding in the field.
- Contributed to the R package [compstatslib](#), used for helping learners understand computational statistics' concepts.
- Researched and compared the predictive accuracy of Bagging, Double-Bagging and Boosting on OLS, Decision Trees, and SEM models.

Teaching Assistant

Feb 2022 - Jul 2023

National Tsing Hua University

Hsinchu, Taiwan

- Assisted in the development of a MOOC related to introductory concepts of data science by gathering datasets, crafting over 10 assignments and testing course flow in sandbox.
- Monitored the learning path of 45 students in the class of Business Analytics using Computational Statistics, providing comprehensive guidance, feedback and weekly homework marking.

Research Intern

Jul 2022 - Dec 2022

Taiwan Textile Research Institute

New Taipei City, Taiwan

- Engaged in smart textiles research and worked in the development of smart textile lower limb bands designed to aid in the rehabilitation of patients with sarcopenia, with the potential to improve rehabilitation outcomes by 25%.
- Exposed the above project at the 2022 DIGI+ x TCA Global Digital Talent Awards and won the Excellence Prize among over 40 entries.
- Collaborated to a project for the development of smart textile gloves with the goal of improving hand-eye coordination of DCD patients.

EDUCATION

National Tsing Hua University

Hsinchu, Taiwan

International MBA

Sep 2021 - Jul 2023

- Cumulative GPA: **4.07/4.3**
- Specialization in **Business Analytics & Data Science**.
- Relevant coursework: Business Analytics using Computational Statistics, Text Mining, Research Methods & Data Analysis, Experiments & Causal Inference, MIS, Marketing Strategies.
- Obtained concentration certificates in Business Analytics and Service Marketing & Management.
- Awarded with International Students Scholarship for the academic years 2021/2022 and 2022/2023.
- IMBA Student Council Member.

Poznań University of Economics and Business

Poznań, Poland

MSc in Financial Engineering

Oct 2019 - Jul 2021

- Cumulative GPA: **4.80/5**
- Relevant coursework: Modern Statistical Methods, Bayesian Methods in Finance, Advanced Financial Market Modeling, Financial Econometrics.
- Co-authored two articles published in the university's magazine - "Hawala - The Western Union of the East" and "The Stock Split Temptation!"
- Awarded with Rector's scholarship for studies in the field of computer science and economic analysis for the academic year 2020/2021.

Poznań University of Technology

Poznań, Poland

BSc in Engineering Management

Oct 2015 - Feb 2019

- Cumulative GPA: **4.56/5**
- Relevant coursework: Financial Accounting, Marketing Research, Project Management, Production Management, Quality Management.

PROJECTS

- [restaurant_booking_bootstrap](#): Conducted a comprehensive analysis of new customer booking patterns on the EZTABLE platform, identifying key trends that informed marketing and operational strategies.
- [csba_confidence_intervals](#): Developed an exploratory R project based on confidence intervals, with the aim to provide insights into the reliability and variability of sample estimates, showcasing the importance of confidence intervals in data-driven decision-making.
- [csba_simulations](#): Developed an R-based project focused on exploring different types of distributions, understanding the behavior of mean and median in different contexts, examining standard deviation and quartiles, and investigating different methods for determining histogram bin sizes.
- [csba_computation_intro](#): Initiated a project demonstrating fundamental data exploration techniques in R, using an age dataset to provide practical insights into demographic analysis.
- [micom_assessment](#): Designed and coded two advanced measurement invariance techniques, robustMICOM and multiMICOM, providing more robust results, faster computational time, and allowing for multi-group comparisons.
- [telecom_service_quality_analysis](#): Enhanced service quality assessment for Atlas Communications by analyzing and verifying their claimed average repair times.
- [interactive_galton_board](#): Developed an interactive Python-based simulation of the Galton Board, facilitating understanding of probability distribution concepts for educational purposes.
- [decision_tree_exploration](#): A walk through different prediction methods including LOOCV, Bagging, Double-bagging and Boosting.
- [kimchi_premium](#): Code for the project titled "Exploring the Impact of Kimchi Premium Factor on Cryptocurrency Portfolios". This study examines the influence of the Kimchi premium factor on cryptocurrency portfolio returns using descriptive statistics and regression panels.

- **Allegro Stock Financial Analysis:** Led a team of 5, representing the Poznan University of Economics and Business among other +200 entries within the CFA Research Challenge. Evaluated the stock of the Polish e-commerce company Allegro.