



# Daniele Melotti

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 IMBA Student Voices

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## PROFILE

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I am a dedicated Data Scientist with a strong analytical background and a passion for transforming data into actionable insights. Experienced in leveraging advanced statistical methods and machine learning algorithms within Python and R frameworks. Recognized for research acumen, ability to manage complex projects, and skill in communicating technical concepts to diverse audiences. I am committed to non-stop learning and eager contribute to team success and excellent organizational outcomes.

## WORK EXPERIENCE

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### Data Scientist *(remote)*

Oct 2023 - Present

*CEMTA*

*Hsinchu, Taiwan*

- Spearheaded the development of OCR and translation components for the CEMTA app, enabling accurate translation of Chinese menus to English through the application of Google Cloud Platform's APIs.
- Engaged in a team of 4 to lead project planning sessions, system architecture design, and tech stack decisions, significantly contributing to the project's strategic direction and technical foundation.

### 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 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.

## SKILLS

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- **Technical:** Python (NumPy, Pandas, Scikit-learn, matplotlib), R, SQL, Git, GCP, Computational Statistics, Hypothesis Testing, SEM, Regression, Decision Trees, PCA, Recommendation Algorithms, Ensemble Methods.
- **Languages:** English (CAE, C2 on CEFR scale), Mandarin (Registered for TOCFL CAT Test on 2024/4/13), Italian (native), Polish (fluent).

## EDUCATION

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### 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, 3 Mandarin Courses.
- 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

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- **Atlas Telecom Service Quality Analysis:** Enhanced service quality assessment for Atlas Communications by analyzing and verifying their claimed average repair times.
- **Restaurant Booking Analysis with Bootstrapping:** 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 - Statistical 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.
- **Rethinking MICOM:** Designed and coded two advanced measurement invariance techniques, robustMICOM and multiMICOM, providing robust results, faster computational time, and allowing for multi-group comparisons.
- **Impact of Kimchi Premium on Cryptocurrency Portfolios:** This study examines the influence of the Kimchi premium factor on cryptocurrency portfolio returns using descriptive statistics and regression panels.