

# Seyma Kalay

## Curriculum Vitae

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Residency: Work permit

### Education

- 2017 - 2022 **Doctor of Philosophy in Applied Economics and Management**  
*Department of Economics and Management, University of Bergamo (Italy)*
- 2013 - 2016 **Master of Science in Finance**  
*Department of Economics and Statistics, University of Siena (Italy)*
- 2006 - 2010 **Bachelor Degree in Physics**  
*Department of Science, University of Istanbul (Turkey)*

### Doctoral Dissertation

- Title Access to Credit, Using Machine Learning Techniques.
- Description Implementing data manipulations, applying machine learning algorithms, and creating interactive user faces.

### Master Thesis

- Title Optimal Portfolio Weights Using Markowitz Portfolio Theory.
- Description Finding the optimal stock portfolio weights, using both covariance and shrinkage covariance matrix.

### Experiences

- 2023 - Curr. **Power BI Developer** - Associate Advanced Analytics Analyst,  
*Mozarc Medical, Milan (Italy),*  
Data Analysis and Visualization: Assist in collecting, cleaning, and analyzing large datasets to identify trends, patterns, and insights. Develop visually appealing dashboards and reports using Power BI to effectively communicate findings to stakeholders.
- 2023 **Assistant** - Market Research,  
*MPS - Evolving Marketing Research, Bergamo (Italy),*  
Analyzing and reporting market research outcomes, using Quantum Software.
- 2017 - 2022 **Researcher** - Statistics,  
*Department of Economics and Management, University of Bergamo (Italy),*  
Implementing data manipulations, applying machine learning technique, and creating interactive user faces.
- 2016 **Internship** - Portfolio,  
*Ziraat Portfolio, Istanbul (Turkey),*  
Observed equity and bond market, familiar with behavioral finance, created a statistical model to maximize the portfolio's return and proved the model efficiency by tracking the data.

2015 **Internship** - Portfolio,

*Invest-AZ, Istanbul (Turkey),*

To analyze the companies by looking at their income statements and balance sheets to make sure it is beneficial to invest in those companies.

2012 **Internship** - Accounted,

*Varkan Group, Istanbul (Turkey),*

Have been effectively responsible for recording accounting cycle and kept tracking consistent balances on both suppliers and purchasers on the company's system.

2007 - 2010 **Part time** - Real Estate,

*Emlak Ada, Istanbul (Turkey),*

Was actively involved in the marketing and communications of the firm. Drafted contracts, scheduled meetings, handled negotiations, updated company website, collaborated with other real estate agencies, generated new solutions, and conducted research on customer needs and preferences.

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## Skills and Competencies

**Languages:** ◦ Native in Turkish ◦ Advance in English ◦ Intermediate in Italian ◦ Beginner in Spanish

**Computer:** Advance: ◦ DAX ◦ Power BI/Query/Pivot ◦ R ◦ R Shiny ◦ Latex ◦ Microsoft Office

Intermediate: ◦ Html ◦ Python ◦ Tableau ◦ SQL

Beginner: ◦ VBA ◦ Java ◦ Json ◦ Snowflake

**Soft Skills:** ◦ Time Management ◦ Problem Solving ◦ Reporting Skills ◦ Multitasking

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## Projects

**R Shiny UI** ◦ MapApp: Conducting an empirical study using both supervised and unsupervised machine learning algorithms.

◦ Biblio: Reproducible bibliometric literature review.

◦ Tp3: Conducting unsupervised machine learning algorithms (Tp3: runs from console).

**Viz** ◦ Tableau: Conducting data visualization using Tableau Destop.

◦ Power BI: Projects that I have been working on.

**HTML** ◦ VizRmd: Combining Tableau, Rshiny, and HTML.

**Software Packages** ◦ Pomodoro: Comparison of predictive power. This package is intended to make modeling and comparing the predictive powers easier based on the data-splits and all data set.

◦ Pepe: Is intended to make descriptive statistics easier.

**GitHub** ◦ Repositories: Current Github repositories.

**Publications** ◦ CRAN Pomodoro: Predictive Power of Linear and Tree Modeling.

◦ CRAN Pepe: Data Manipulation.

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## Awards and Honors

2017–2022 UniBG PhD Fund,

2013–2016 DSU - Toscana,

2007–2010 Turkish Gas Foundation Scholarship,

2007–2010 Turkish Women Community Scholarship,

2006–2010 Yapi Kredi Bank Scholarship.

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## References

Reference letters will be provided upon request.