

Beyza Burkay

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EDUCATION

University of Applied Sciences and Arts of Southern Switzerland (SUPSI)

Master of Science in Engineering – Business Engineering

**Previous graduate study MSc in Management & Informatics at USI in Fall 2024.*

Lugano, Switzerland

Spring 2025 – Spring 2026

Sabancı University

Bachelor of Science – Industrial Engineering

Relevant Coursework: Operations Research I, II & III, Data Visualization and Analysis, Simulation, Decision Analysis, Information Systems, Int. to Business Analytics, Int. to Data Science, Quality Planning & Control

İstanbul, Turkey

Fall 2019 – Fall 2023

Çağdaş Öncü Highschool

- 40% Academic Scholarship

Bursa, Turkey

Graduated 2019

PROFESSIONAL WORK EXPERIENCE

Burkay Tekstil Sanayi ve Ticaret A.S.

Quality Control and Assurance Intern – Full Time

Bursa, Turkey

June - September 2022

- Contributed to cost reduction by optimizing staff work distribution.
- Carried out a Kaizen study with Quality Control team which resulted in a 62.3% increase in the maximum capacity of opened rolls.
- Demonstrated how two separate systems could be simulated using Arena to visualize the potential scenarios of system improvements.

Ziraat Teknoloji

Business Analyst Intern – Part Time

İstanbul, Turkey

October 2023 – June 2024

- Conducted comprehensive software tests across UAT and Preprod environments, using POS and ATM devices with payment cards, resolving issues through MS SQL analysis and collaboration with third-party clients.
- Created new UAT clients and payment cards by coordinating with third-party clients for card production to ensure diverse scenarios for testing on physical devices.
- Documented tasks and issues on Jira, using agile methodologies to track progress transparently and prioritize tasks effectively among the team.

PROJECTS

IE 305 | Simulation Project

Arena

İstanbul, Turkey

Spring 2022

- Analyzed four datasets with the Arena Input Analyzer and identified the appropriate distributions for each set.
- Applied the Chi-Square and Kolmogorov-Smirnov tests and estimated their distribution parameters using MLE.
- Simulated a complex system in Arena using the discovered distributions and parameters, exported a detailed system output report, and conducted various scenarios in the Arena Output Analyzer by adjusting the parameters.

ENS 491&492 | Graduation Project

Wine Reviews Dataset

İstanbul, Turkey

Fall 2022 - Spring 2023

- Developed and implemented various ML models, achieving 73% accuracy with decision tree classifier on a large complex dataset.
- Performed data cleaning and exploratory data analysis through visualizations, unveiling insights into wine attributes and production across regions.
- Enhanced predictive modeling by extracting additional information from the dataset, including sentiment scores from user comments using NLP, generating binary columns for regression, and scraped wine colors by creating a grape variety-based color dictionary.

DCAPVE | Simulation Project

DDDDModelEditor

Lugano, Switzerland

Spring 2025

- Developed discrete-event simulation of a PCB production line, integrating robotic assembly, palletization, and defect-handling logics.
- Implemented Java state machines using the TTS Network framework to automate assembly workflows, pallet batching, oven timing, and defect identification.
- Modeled and validated complex manufacturing processes, while monitoring KPIs and performance metrics in Grafana for real-time quality control.

SUPSI Individual Project | Feasibility Study

Extended Reality Integration at Veragouth Xilema

Lugano, Switzerland

Fall 2025 – Spring 2026

- Evaluated the TheAppXR platform via Meta Quest 3S under real usage conditions and identified its limitations for engineering, production and on-site installation workflows.
- Conducted expert interviews and mapped carpentry and joinery processes to identify operational risks, information gaps and XR-relevant intervention points.
- Developed a workflow-first XR decision framework by translating use cases into technical and safety requirements and comparing their suitability across VR, assisted reality and optical mixed reality.

SKILLS, LANGUAGES & ADDITIONAL INFORMATION

Technical Skills: MS SQL, Python, R, Java, DDDModelEditor, Jira, Arena, Microsoft Office

Languages: Turkish (Native), English (Fluent), Korean (Basic)

Extracurricular: Founded the high school orchestra; finalist in Nilüfer High School Music Competition (2018 & 2019).

Personal Interests: Cinema, Music, Fitness, Skiing, Photography, Console Games

