Sinem DEMIR

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Education

Université de Neuchâtel — Neuchâtel, Suisse
M.Sc. in Applied Economics — 09/2022 - 06/2024
- Concentration: Data Science methodologies and applications in economics- GPA: 4.85/6.0
- Thesis: Advanced (ML) Methods for Deforestation Analysis and Sustainable Commodity

Bilkent University — Ankara, Turkey
B.Sc. in Economics (in English) — 09/2017 - 06/2022
- Multidisciplinary coursework in Economics, Management, and Computer Science.
- Graduated with honors in 3.5 years (instead of 4 years), emphasizing analytical and quantitative skills, GPA: 3.06/4.0.
- Thesis: "The Patterns of Women Workforce during COVID-19 in Germany and Turkey"
- Active employee of the Radio Bilkent company for four years.

Experience

Data Analyst (ADMI) — Geneva, Switzerland
The European Organization for Nuclear Research (CERN) — 2024 - Present
- Developed Python scripts *(SWAN, SPARK)* for data integration into GitHub repositories (Grafana, Jupyter Notebook).
- Conducted research on URL encoding across multiple browsers and PDF formats to enhance data retrieval.
- Created dynamic tables using PL/SQL for report generation, developing 35 reports with Pentaho Report Designer.
- Supported teams with SQL scripts and managed daily data maintenance of CRG KPIs, presenting insights at team meetings.

Junior Data Analyst (Internship) — Nyon, Switzerland
Earthworm Foundation — September 2023 - 2024
- Led supply chain analysis solutions, standardizing data and optimizing sustainability processes, achieving a 20% reduction in resource waste.
- Automated processes using Python, saving approximately 15 hours per week through web scraping.
- Collaborated with international teams to implement data-driven strategies, improving operational efficiency by 30%.

Data Scientist Intern — Ankara, Turkey
SRM Technologies — Summer 2023
- Analyzed large datasets for hotel pricing using regression analysis and machine learning, identifying actionable insights for predictive modeling.
- Developed forecasting dashboards using AWS tools, improving reporting efficiency by 25%.

Scientific Work

M.Sc. Thesis – Predictive Forestry: Advanced Methods for Deforestation Analysis and Sustainable Commodity Production in Indonesia — *Université de Neuchâtel, 2024*
- Applied machine learning models (neural networks, gradient boosting, decision trees) to analyze satellite and supply chain data.
- Developed deforestation risk profiles and clustering techniques to improve early detection in palm oil production regions.

Natural Gas Consumption Forecasting using ARMA Models — *Université de Neuchâtel, 2023*
- Forecasted Switzerland's natural gas demand using ARMA time series models.
- Evaluated the implications of geopolitical risks and supply constraints on national energy planning.

Evaluating Congestion Charge Policy in London using Difference-in-Differences — *Université de Neuchâtel, 2022*
- Assessed policy effects on traffic accident rates using DiD analysis between treated and control boroughs.
- Contributed to empirical evaluations of urban transport interventions and public safety outcomes.

B.Sc. Thesis – The Patterns of Women Workforce during COVID-19 in Germany and Turkey — *Bilkent University, 2022*
- Conducted cross-national comparative research using mixed-methods analysis (surveys, policy review).
- Explored gender disparities in labor markets during COVID-19 from institutional, economic, and cultural perspectives.

Causal Impact of Smoking on Birthweight using Matched Panel Data — *Bilkent University, 2022*
- Estimated treatment effects using matching algorithms to address endogeneity in observational data.
- Quantified the health impact of maternal smoking with policy relevance for prenatal care programs.

Skills & Interests

Technical: Python, R, SQL, PL/SQL, MySQL, PostgreSQL, Power BI, Tableau, Pentaho, Git,Confluence, Latex,AWS Grafana.
Language: Turkish (native), English (C1), French (B2), Spanish (A2).
Skills: Communication, Public Speaking, Organization & Time Management, Teamwork
Interests: Trombone player, hiking, indoor climbing, professional swimming.