

Ömer Ekmen

Data Science & Software Engineering

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Summary

Mathematics graduate (B.Sc., Galatasaray University) with a 4.0/4.0 reinforcement learning thesis and hands-on experience building production-grade, data-driven systems in enterprise environments. Combines a strong academic foundation in data science, optimization, and machine learning, complemented by hands-on experience building enterprise ERP systems and independently deploying full-stack cloud platforms.

Education

B.Sc. in Mathematics

Sep 2018 – Feb 2026

Galatasaray University – Istanbul, Turkey

GPA: 2.99 / 4.0

- **Thesis:** Apprentissage par Renforcement (Reinforcement Learning) – Grade: AA (4.0 / 4.0)
Advisor: Assoc. Prof. Dr. Ayşegül Ulus
- **Relevant Coursework:** Machine Learning, Natural Language Processing, Probability Theory, Linear Algebra, Numerical Analysis, Applied Mathematics, Cryptography
- **Instruction Language:** French (full 4-year academic curriculum delivered in French)
- **Leadership:** Mathematics Club Board Member (2021–2022), Photography Club Board Member (2018–2023); organized 35+ academic and cultural events

Experience

Software Engineer Intern

Jun 2024 – Present

Otokoç Otomotiv – Istanbul, Turkey

- Contributed to backend development of enterprise ERP systems using .NET and SQL Server, supporting finance and operational domains across multiple departments.
- Developed and optimized T-SQL stored procedures for operational workflows, reporting pipelines, and data transformation processes.
- Designed complex queries across highly relational schemas to support system operations and analytical reporting.
- Built SSIS packages to automate recurring data integration and ETL processes.
- Developed SSRS reports used by business teams for operational monitoring and decision-making.
- Collaborated on 20+ deliverables using Agile methodologies and Azure DevOps with cross-functional teams.

Data Analytics Intern

Sep 2023 – Oct 2023

Vakıf Katılım Bank – Istanbul, Turkey

- Analyzed financial and operational datasets using SQL and Python to support senior management decision-making.
- Developed structured reports and dashboards using business intelligence tools for data visualization.
- Collaborated with finance and compliance teams to streamline data workflows and ensure regulatory alignment.

Projects

Property Management Analytics Platform

Production System – Private Repository

- Engineered a full-stack platform managing 100+ property listings with automated rent tracking, expense analytics, and tenant management for a real client.
- Designed a PostgreSQL schema with 15+ normalized tables; optimized queries reduced dashboard load time by 60%.
- Built financial reporting module generating monthly P&L statements, occupancy metrics, and payment summaries.
- **Stack:** Django, PostgreSQL, REST APIs, HTML/CSS, JavaScript, Bootstrap

SpaceX Falcon 9 Landing Prediction System

GitHub

- Built classification models (Logistic Regression, SVM, Decision Trees, KNN) achieving 85% accuracy in predicting first-stage landing success from launch telemetry data.
- Performed end-to-end data pipeline: API data collection, cleaning, feature engineering (payload mass, orbit type, launch site), and model evaluation with cross-validation.
- Created interactive geospatial visualizations using Folium and Plotly for landing site analysis.
- **Stack:** Python, Scikit-Learn, Pandas, NumPy, Matplotlib, Folium, Plotly

Real-World Data Analysis Portfolio

GitHub

- Conducted multi-dataset analysis: housing price prediction (regression), customer segmentation (K-means clustering), and market trend classification.
- Applied statistical hypothesis testing and feature selection techniques to improve model interpretability.
- **Stack:** Python, Scikit-Learn, Pandas, Plotly, Seaborn

Technical Skills

Languages: Python, SQL (T-SQL, PostgreSQL), C#, JavaScript

Data Science & ML: Scikit-Learn, TensorFlow, PyTorch, Pandas, NumPy, Statistical Modeling, Hypothesis Testing, Feature Engineering, A/B Testing

Visualization & BI: Matplotlib, Seaborn, Plotly, Folium, Tableau, Power BI, SSRS

Databases & Data Engineering: SQL Server, PostgreSQL, SSIS, Query Optimization, Data Modeling

Software Engineering: Django, .NET, REST APIs, Git, Docker, Azure DevOps, Agile/Scrum

Certifications

IBM Data Science Professional Certificate – Coursera, Aug 2023

Credential: TK3PHHTVV248

Languages

Turkish Native

English Professional Working Proficiency (B2+)

French Professional Working Proficiency (B2+)