

# Bilyoner Sportsbook Betslip History Analysis - CS210

## Term Project

Musa Ersoy 30646

### Overview

Uncovering my betting patterns, what are my favourite betting options, which teams do I like to bet most, what are the statistics in my favourite leagues? A deep dive into the strategies that shape my sportsbet journey! #Bilyoner #BetAnalysis #Sabanci #CS210

This project revolves around the analysis of betslip history from Bilyoner, a sportsbook. The aim is to parse, analyze, and visualize betting data to gain insights into betting patterns, outcomes, behaviors and implement machine learning.

### Data Source and Processing

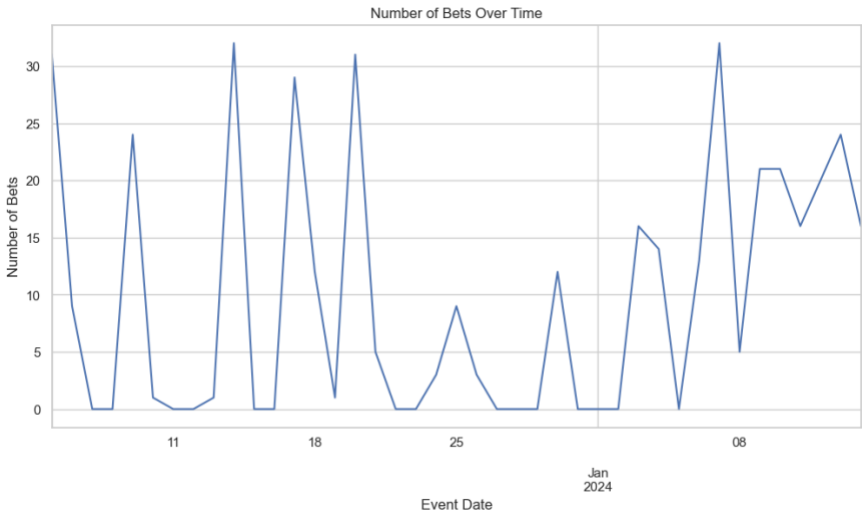
- **HTML Data Extraction:** The raw data for this project was extracted from Bilyoner in HTML format.
- **Data Parsing:** Utilizing Beautiful Soup, the HTML data was parsed effectively.
- **Dataframe Conversion:** The parsed data was then converted into a Pandas DataFrame for ease of analysis.

### Analysis Techniques and Tools

- **Data Cleaning:** Preliminary data cleaning steps were taken to ensure the accuracy and quality of the analysis.
- **Statistical Analysis:** Various statistical methods were applied to understand the betting trends and patterns.
- **Python Libraries Used:** Key Python libraries used in this analysis include Pandas for data manipulation, Matplotlib and Seaborn for data visualization, and Beautiful Soup for HTML parsing.

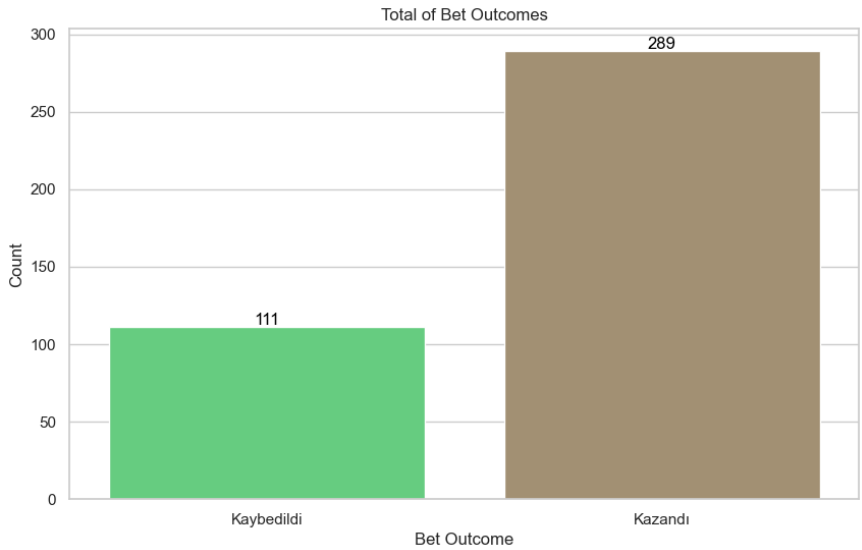
# Key Findings and Visualizations

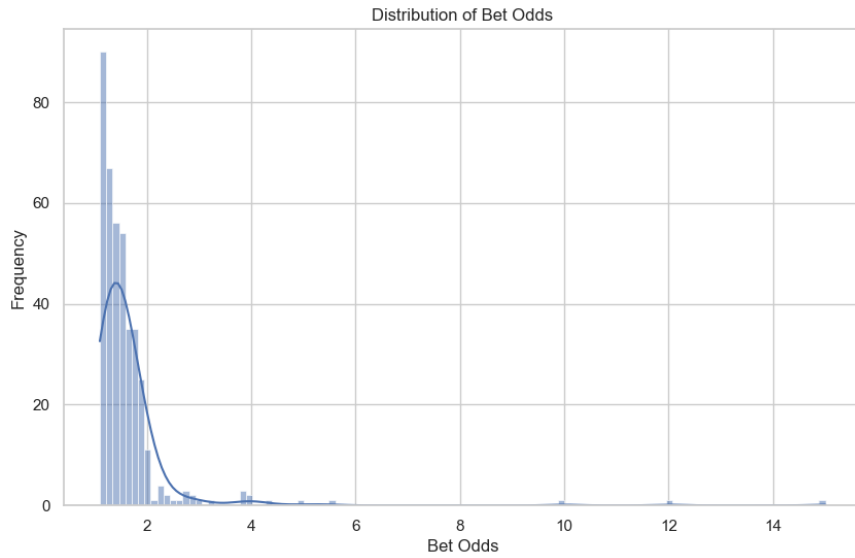
## 1. Time Series Analysis:



## 2. Bet Outcome Distribution & Total of Outcomes:

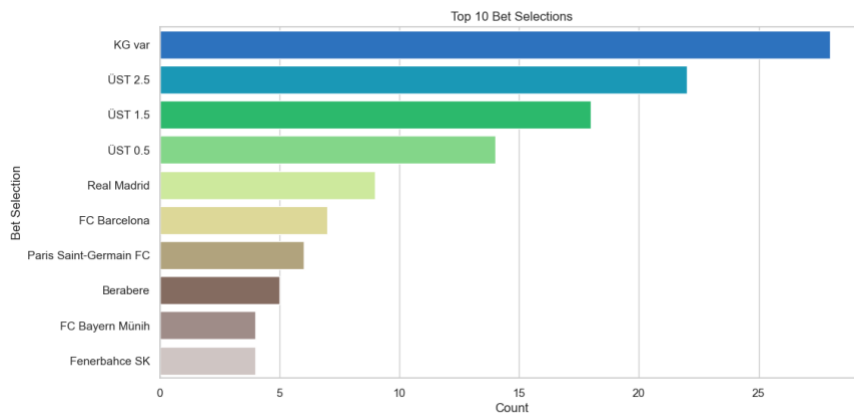
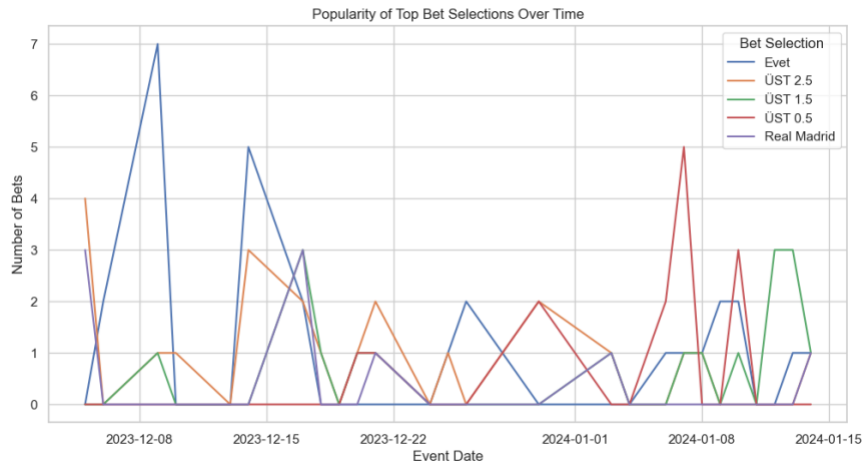
- A count plot showing the distribution of different bet outcomes.
- This visualization helps in understanding the total win/rate of outcomes among the bets placed.





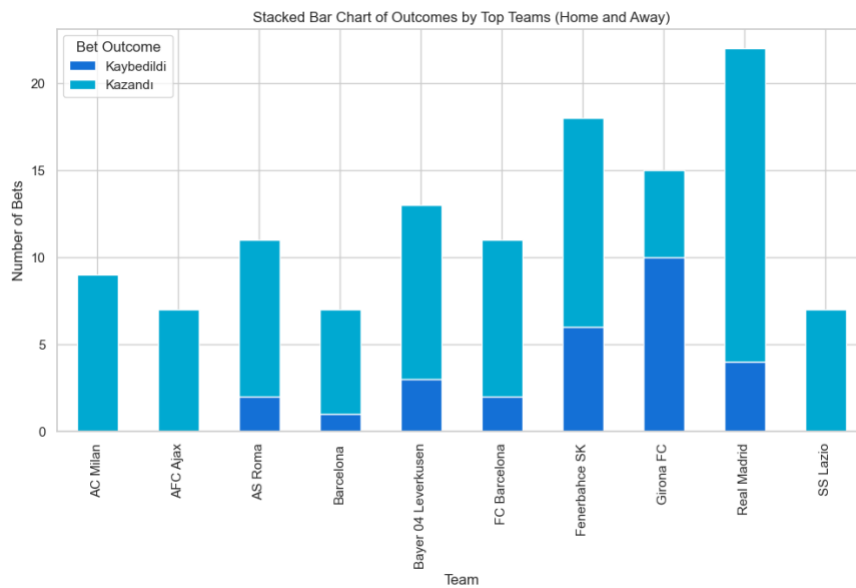
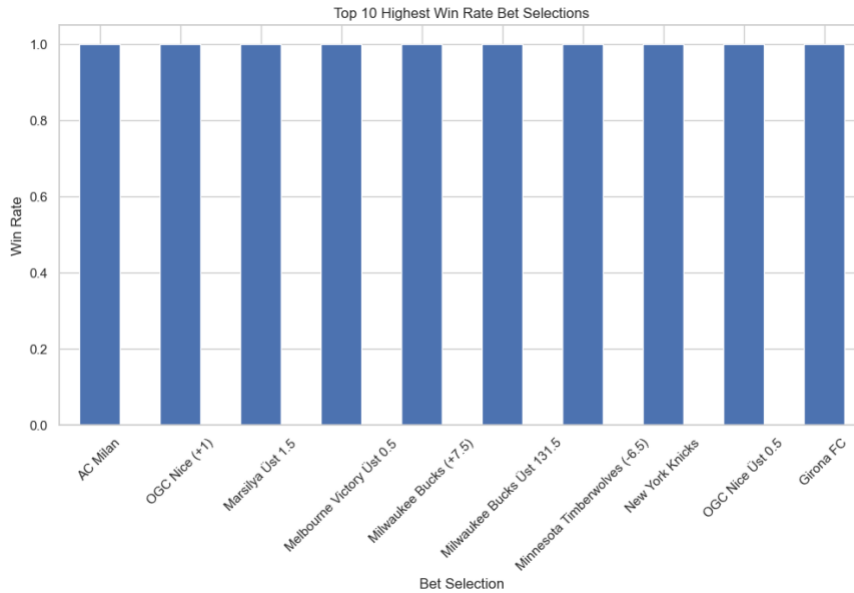
### 3. Popular Selections Made:

- Popular selections over time & Top played selection counts



#### 4. Highest Win Rate Bets & Top Teams Played on

- Bar charts for top win rate bet selections (1.0 indicates 100%) and most selected teams and win rates of related bets to understand betting patterns and if they are working well or not.



## **Machine Learning**

- Used sklearn library in order to implement machine learning model and training.
- To avoid categorical columns, one-hot encoder is used.
- Re-trained and tuned the model to fit our needs better.
- Based on trained data and ML model, created a Betslip Predictor that gets input upcoming match in a format and predicts if it is likely to be happen or not.

## **Conclusion**

The Bilyoner Sportsbook Betslip History Analysis offers a comprehensive view into the betting patterns, outcomes, and behaviors of users on the Bilyoner platform. Through meticulous data processing and sophisticated visualizations, the project successfully unravels key insights into sports betting trends. This analysis/machine learning model can be instrumental for strategic planning, marketing, and customer behavior analysis in the sports betting industry.