

Football Match Prediction User Manual

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Group GitHub Link:

<https://github.com/RecepSamiOzdemir/software-engineering-project/tree/main/Football%20Match%20Result%20Prediction>

Football Match Prediction GitHub Link

https://github.com/gulssumm/football_prediction

Note: This user manual reported by Zeynep Sude Altın, Gülsüm Çetinözlü
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1 Introduction

- Brief overview of the project
 - This project collects football data from specific sites and filters it based on user preferences. It supports fetching real-time data for a specific year or accessing data from the database, with filters for data ranges and team names.
- Objectives and goals
 - Provide a tool to fetch real-time football data, apply filters.
- Scope of the project
 - Focuses on data collection, cleaning, visualization, and saving football matches results.

2 System Requirements

- Software Requirements
 - Python 3.7+
 - IDE
 - Following libraries

```
selenium==4.11.2
pandas==1.3.5
python-dateutil==2.9.0
webdriver-manager==4.0.2
```

3 Installation Guide

- Prerequisites: Ensure Python and required libraries are installed
- Download: Visit the GitHub Repository and download the project.

4 User Interface Overview

- **Login Screen:**
 - Enter the following information to login.
Username: admin ; Password: 123
- **Main Screen:**
 - Filters: Search by league, team name, initial year, and end year.

- Data Table: Displays fetched and filtered data. The general appearance of the interface and data table is as in the figure below.

FOOTBALL MATCHES

Select a League:

Enter a Team Name (Optional):

Enter Initial Year:

Enter End Year:

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
No data available	No data available	No data available	No data available	No data available	No data available

- Let's get the League One data for years between 2000-2001 from database:

FOOTBALL MATCHES

Select a League:

Enter a Team Name (Optional):

Enter Initial Year:

Enter End Year:

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
League One	May 2001	Reading	Walsall	2	3
League One	May 2001	Reading	Wigan Athletic	2	1
League One	May 2001	Walsall	Stoke City	4	2
League One	May 2001	Stoke City	Walsall	0	0
League One	May 2001	Wigan Athletic	Reading	0	0
League One	May 2001	Brentford	Bury	3	1
League One	May 2001	Bristol Rovers	Wrexham	4	0
League One	May 2001	Luton Town	Port Vale	1	1
League One	May 2001	Millwall	Oldham Athletic	5	0
League One	May 2001	Northampton Town	Walsall	0	3
League One	May 2001	Notts County	Oxford United	2	1
League One	May 2001	Peterborough United	Rotherham United	1	1
League One	May 2001	Reading	Bournemouth	3	3
League One	May 2001	Stoke City	Swindon Town	4	1
League One	May 2001	Swansea City	Cambridge United	1	1
League One	May 2001	Wigan Athletic	Bristol City	0	0
League One	May 2001	Wycombe Wanderers	Colchester United	1	1

- Now, Let's fetch data for League One for years between 2021-2022.

FOOTBALL MATCHES

Select a League:
League One

Enter a Team Name (Optional):

Enter Initial Year:
2021

Enter End Year:
2022

GET DATA FROM DB

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
League One	May 2021	Blackpool	Lincoln City	2	1
League One	May 2021	Sunderland	Lincoln City	2	1
League One	May 2021	Blackpool	Oxford United	3	3
League One	May 2021	Lincoln City	Sunderland	2	0
League One	May 2021	Oxford United	Blackpool	0	3
League One	May 2021	Blackpool	Bristol Rovers	1	0
League One	May 2021	Charlton Athletic	Hull City	1	0
League One	May 2021	Crewe Alexandra	Shrewsbury Town	3	2
League One	May 2021	Doncaster Rovers	Peterborough United	1	4
League One	May 2021	Gillingham	Plymouth Argyle	1	0
League One	May 2021	Ipswich Town	Fleetwood Town	3	1
League One	May 2021	Lincoln City	AFC Wimbledon	0	0
League One	May 2021	Milton Keynes Dons	Rochdale	0	3
League One	May 2021	Oxford United	Burton Albion	4	0
League One	May 2021	Portsmouth	Accrington Stanley	0	1
League One	May 2021	Sunderland	Northampton Town	1	1
League One	May 2021	Wigan Athletic	Swindon Town	3	4

CLEAR

START WEB SCRAPING

SCRAPE TÜRKİYE MATCHES

- Now, Let's filter according to team name.

FOOTBALL MATCHES

Select a League:
League One

Enter a Team Name (Optional):
Lincoln City

Enter Initial Year:
2021

Enter End Year:
2022

GET DATA FROM DB

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
League One	May 2021	Blackpool	Lincoln City	2	1
League One	May 2021	Sunderland	Lincoln City	2	1
League One	May 2021	Lincoln City	Sunderland	2	0
League One	May 2021	Lincoln City	AFC Wimbledon	0	0
League One	May 2021	Charlton Athletic	Lincoln City	3	1
League One	May 2021	Peterborough United	Lincoln City	3	3
League One	May 2021	Shrewsbury Town	Lincoln City	0	1
League One	May 2021	Lincoln City	Hull City	1	2
League One	May 2021	Burton Albion	Lincoln City	0	1
League One	May 2021	Bristol Rovers	Lincoln City	0	1
League One	May 2021	Lincoln City	Milton Keynes Dons	4	0
League One	May 2021	Lincoln City	Blackpool	2	2
League One	May 2021	Sunderland	Lincoln City	1	1
League One	May 2021	Lincoln City	Gillingham	0	3
League One	May 2021	Lincoln City	Rochdale	1	2
League One	May 2021	Ipswich Town	Lincoln City	1	1
League One	May 2021	Lincoln City	Crewe Alexandra	3	0

CLEAR

START WEB SCRAPING

SCRAPE TÜRKİYE MATCHES

- Let's fetch Türkiye's one of the leagues this time.

FOOTBALL MATCHES

Select a League:

Trendyol Süper Lig

Enter a Team Name (Optional):

Enter Initial Year:

2020

Enter End Year:

2021

GET DATA FROM DB

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
Trendyol Süper Lig	17.01.2020 20:00	MKE ANKARAGÜCÜ	İTTIFAK HOLDING KONYASPOR	0	1
Trendyol Süper Lig	18.01.2020 14:00	AYTEMİZ ALANYASPOR	HES KABLO KAYSERİSPOR	5	1
Trendyol Süper Lig	18.01.2020 17:00	MEDİPOL BAŞAKŞEHİR FK	BTC TÜRK YENİ MALATYASPOR	4	1
Trendyol Süper Lig	18.01.2020 20:00	GAZİANTEP FUTBOL KULÜBÜ A.Ş.	FENERBAHÇE A.Ş.	0	2
Trendyol Süper Lig	19.01.2020 13:30	ANTALYASPOR A.Ş.	GÖZTEPE A.Ş.	0	3
Trendyol Süper Lig	19.01.2020 16:00	TRABZONSPOR A.Ş.	KASIMPAŞA A.Ş.	6	0
Trendyol Süper Lig	19.01.2020 16:00	GALATASARAY A.Ş.	YUKATEL DENİZLİSPOR	2	1
Trendyol Süper Lig	19.01.2020 19:00	BEŞİKTAŞ A.Ş.	DEMİR GRUP SIVASSPOR	1	2
Trendyol Süper Lig	20.01.2020 20:00	ÇAYKUR RİZESPOR A.Ş.	GENÇLERBİRLİĞİ	2	0
Trendyol Süper Lig	24.01.2020 20:00	GENÇLERBİRLİĞİ	GAZİANTEP FUTBOL KULÜBÜ A.Ş.	1	0
Trendyol Süper Lig	25.01.2020 14:00	HES KABLO KAYSERİSPOR	MKE ANKARAGÜCÜ	1	1
Trendyol Süper Lig	25.01.2020 17:00	KASIMPAŞA A.Ş.	AYTEMİZ ALANYASPOR	1	2
Trendyol Süper Lig	25.01.2020 20:00	FENERBAHÇE A.Ş.	MEDİPOL BAŞAKŞEHİR FK	2	0
Trendyol Süper Lig	26.01.2020 13:30	YUKATEL DENİZLİSPOR	ANTALYASPOR A.Ş.	0	3
Trendyol Süper Lig	26.01.2020 16:00	GÖZTEPE A.Ş.	BEŞİKTAŞ A.Ş.	2	1
Trendyol Süper Lig	26.01.2020 19:00	İTTIFAK HOLDING KONYASPOR	GALATASARAY A.Ş.	0	3
Trendyol Süper Lig	27.01.2020 20:00	DEMİR GRUP SIVASSPOR	ÇAYKUR RİZESPOR A.Ş.	1	1

CLEAR

START WEB SCRAPING

SCRAPE TÜRKİYE MATCHES

- If you click the “Clear” button it will clean all data in interface.

FOOTBALL MATCHES

Select a League:

Trendyol Süper Lig

Enter a Team Name (Optional):

Enter Initial Year:

2020

Enter End Year:

2021

GET DATA FROM DB

League	Date	Home_Team	Away_Team	Home_Score	Away_Score
No data available	No data available	No data available	No data available	No data available	No data available

CLEAR

START WEB SCRAPING

SCRAPE TÜRKİYE MATCHES

5 Features and Functionalities

- **Data Collection:** Scrapes details like League name, team name, date.
- **Data Cleaning:** Removes previous data from interface.
- **Data Saving:** Save fetched data in csv form.

6 Usage Instructions

- Run “login_screen.py” file in the project folder.
- Use “Scrape Türkiye Matches” button to fetch Türkiye matches data, and use “Start Web Scraping” for the rest of the leagues.
- Use “Get Data From DB” button to have data from database.

7 Troubleshooting and Maintenance

- Common Issues:
 - Missing libraries: Ensure dependencies are installed. Check “requirements.txt” in the project folder.
 - Fetching or getting data from Trendyol 1. League 2000-2001: Trendyol 1. League started in 2001 so there is no data.
 - No such table: User error : Run “merged_db_creation.py” to create merge.db again and run “login_screen.py”.
 - If you get URL error for path: Change it to your local path.

8 References

- <https://stackoverflow.com/questions/75060132/error-from-selenium-attributeerror-service-object-has-no-attribute-process>
- <https://www.geeksforgeeks.org/python-web-scraping-tutorial/>
- <https://www.scrapingbee.com/webscraping-questions/selenium/how-to-find-elements-by-xpath-selenium/>