

LA LIGA MATCH DATA SCRAPING AND ANALYSIS REPORT

Project Overview:

- This project is a Python-based web scraper that collects match data for La Liga from the official website (fbref.com).
The data includes match details such as home/away teams, scores, xG (expected goals), attendance, and venue.
- The scraper utilizes libraries like Requests for HTTP requests, BeautifulSoup for HTML parsing, Pandas for data manipulation, and Matplotlib for visualizing match results.

Scraping the Data:

- To extract the match details, we first send an HTTP request to the La Liga schedule page using the Requests library.
- The response content is parsed using BeautifulSoup, where we identify the relevant table and loop through each row to extract match data.
- The data is then organized into a structured format using Pandas for further processing.

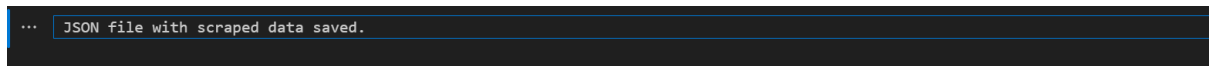
Generating Insights & Visualizations:

- Once the match data was collected, we focused on extracting the score and splitting it into home and away goals.
- The results were classified into three categories: Home Win, Away Win, and Draw.
- Using Matplotlib, a bar chart was created to visualize the count of each match result, providing insights into the distribution of wins and draws across the league.

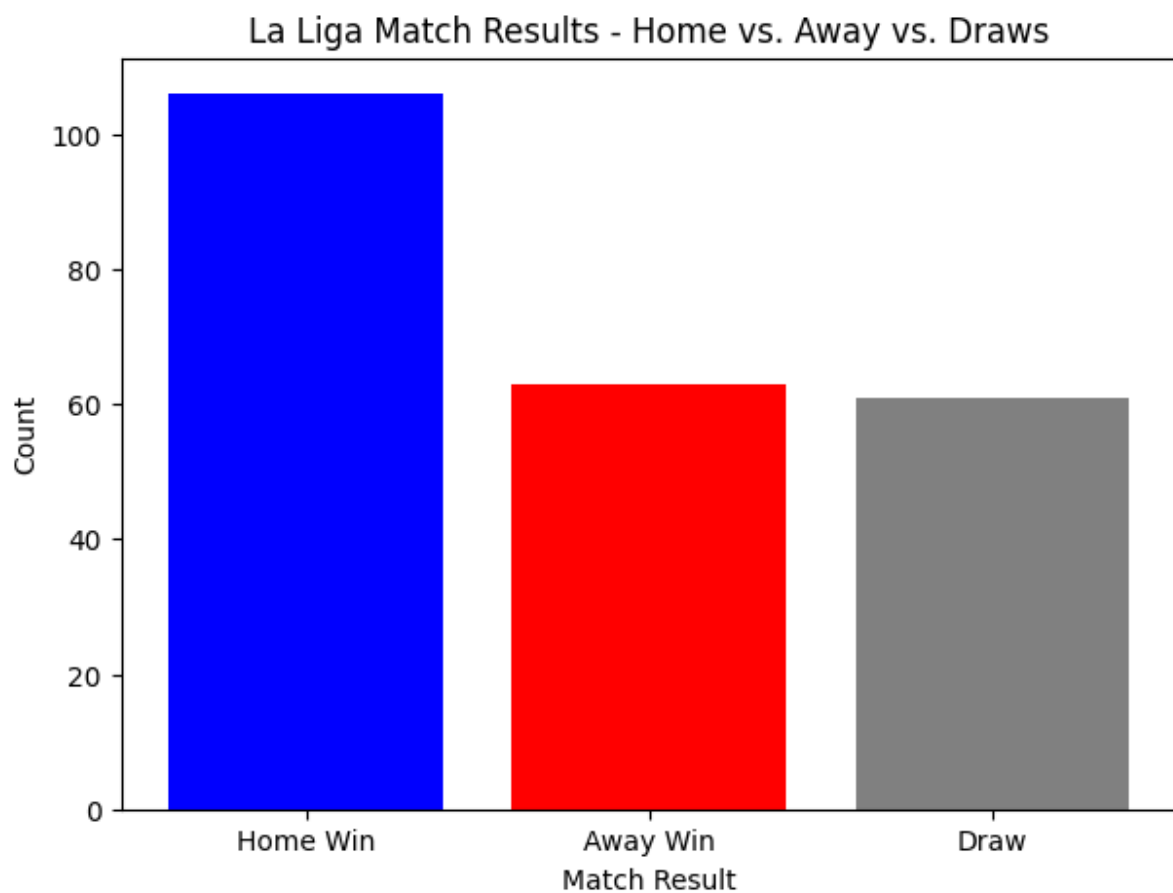
GitHub Repository:

- You can find the code and other related project files in my GitHub repository at:
<https://github.com/AaronPatrick562004/OSTDS.git>

Screenshot 1:



Screenshot 2:



Screenshot 3:

Wk	Day	Date	Time	Home xG (Home)	Score	xG (Away)	Away Attendance	Venue	Referee	Match Report	Notes	Home Goals	Away Goals	Result	Total Goals
1	Sun	2024-08-18	21:30	Mallorca	1.0	1-1	0.6	Real Madrid	23,010	Estadi Mallorca Son Moix	Match Report	1	1	Draw	2
2	Sun	2024-08-25	17:00	Real Madrid	2.1	3-0	0.4	Valladolid	70,178	Estadio Santiago Bernabéu	Match Report	3	0	Home Win	3
3	Thu	2024-08-29	20:30	Las Palmas	0.8	1-1	2.5	Real Madrid	31,192	Estadio de Gran Canaria	Mateo Busquets Match Report	1	1	Draw	2
4	Sun	2024-09-01	21:30	Real Madrid	2.4	2-0	0.6	Betis	73,072	Estadio Santiago Bernabéu	Javier Alberola Match Report	2	0	Home Win	2
5	Sat	2024-09-14	21:00	Real Sociedad	1.1	0-2	2.3	Real Madrid	37,370	Reale Arena	Juan Martínez Match Report	0	2	Away Win	2
6	Sat	2024-09-21	21:00	Real Madrid	4.4	4-1	0.3	Espanyol	17,204	Estadio Santiago Bernabéu	José Luis Munuera Match Report	4	1	Home Win	5
7	Tue	2024-09-24	21:00	Real Madrid	1.3	3-2	0.9	Alavés	67,480	Estadio Santiago Bernabéu	Alejandro Muñoz Match Report	3	2	Home Win	5
8	Sun	2024-09-29	21:00	Atlético Madrid	1.3	1-1	0.8	Real Madrid	70,112	Riyadh Air Metropolitan Stadium	Mateo Busquets Match Report	1	1	Draw	2
9	Sat	2024-10-05	21:00	Real Madrid	0.5	2-0	1.1	Villarreal	73,842	Estadio Santiago Bernabéu	Guillermo Cuadra Match Report	2	0	Home Win	2
10	Sat	2024-10-19	21:00	Celta Vigo	1.8	1-2	0.7	Real Madrid	24,445	Estadio Abanca Balaídos	Alejandro Hernández Match Report	1	2	Away Win	3
11	Sat	2024-10-26	21:00	Real Madrid	1.5	0-4	2.6	Barcelona	78,192	Estadio Santiago Bernabéu	Jose Maria Sánchez Match Report	0	4	Away Win	4
13	Sat	2024-11-09	14:00	Real Madrid	3.1	4-0	0.1	Osasuna	72,462	Estadio Santiago Bernabéu	Mario Melero Match Report	4	0	Home Win	4
14	Sun	2024-11-24	18:30	Leganes	0.1	0-3	1.8	Real Madrid	12,338	Estadio Municipal de Butarque	Javier Alberola Match Report	0	3	Away Win	3
15	Sun	2024-12-01	16:15	Real Madrid	3.2	2-0	0.5	Getafe	74,341	Estadio Santiago Bernabéu	Alejandro Hernández Match Report	2	0	Home Win	2
19	Wed	2024-12-04	21:00	Athletic Club	1.8	2-1	1.7	Real Madrid	51,364	San Mamés	Jose Maria Sánchez Match Report	2	1	Home Win	3
16	Sat	2024-12-07	21:00	Girona	0.4	0-3	0.9	Real Madrid	13,827	Estadi Municipal de Montilivi	Jesús Gil Match Report	0	3	Away Win	3
17	Sat	2024-12-14	21:00	Rayo Vallecano	1.6	3-3	0.7	Real Madrid	14,168	Estadio del Rayo Vallecano	Juan Martínez Match Report	3	3	Draw	6
18	Sun	2024-12-22	16:15	Real Madrid	2.0	4-2	1.3	Sevilla	75,227	Estadio Santiago Bernabéu	Isidro Díaz de Mera Match Report	4	2	Home Win	6
12	Fri	2025-01-03	21:00	Valencia	1.3	1-2	2.7	Real Madrid	46,420	Estadio de Mestalla	César Soto Match Report	1	2	Away Win	3
20	Sun	2025-01-19	16:15	Real Madrid	0.8	2-2	1.1	Las Palmas	74,808	Estadio Santiago Bernabéu	Alejandro Quintero Match Report	2	2	Draw	4
21	Sat	2025-01-25	21:00	Valladolid	0.2	0-3	2.0	Real Madrid	16,025	Estadio Municipal José Zorrilla	Mateo Busquets Match Report	0	3	Away Win	3
22	Sat	2025-02-01	21:00	Espanyol	0.3	1-0	1.3	Real Madrid	33,669	RCD Espanyol	Alejandro Muñoz Match Report	1	0	Home Win	1
23	Sat	2025-02-08	21:00	Real Madrid	1.6	1-1	1.5	Atlético Madrid	78,082	Estadio Santiago Bernabéu	César Soto Match Report	1	1	Draw	2

Screenshot 4:

Draw Matches:

Wk	Day	Date	Time	Home xG (Home)	Score	xG (Away)	Away Attendance	Venue	Referee	Match Report	Notes	Home Goals	Away Goals	Result	Total Goals
1	Thu	2024-08-15	19:00	Athletic Club	0.3	1-1	0.8	Getafe	47,845	San Mamés	Match Report	1	1	Draw	2
1	Thu	2024-08-15	21:30	Betis	1.4	1-1	1.6	Girona	54,084	Estadio Benito Villamarín	Match Report	1	1	Draw	2
1	Fri	2024-08-16	20:30	Las Palmas	1.4	2-2	1.8	Sevilla	24,843	Estadio de Gran Canaria	Match Report	2	2	Draw	4
1	Sat	2024-08-17	19:00	Osasuna	1.7	1-1	1.0	Leganes	19,561	Estadio El Sadar	Match Report	1	1	Draw	2
1	Sun	2024-08-18	21:30	Mallorca	1.0	1-1	0.6	Real Madrid	23,010	Estadi Mallorca Son Moix	Match Report	1	1	Draw	2
1	Mon	2024-08-19	21:30	Villarreal	0.8	2-2	1.1	Atlético Madrid	21,566	Estadio de la Cerámica	Match Report	2	2	Draw	4
2	Sat	2024-08-24	21:30	Getafe	0.5	0-0	0.2	Rayo Vallecano	9,529	Coliseum Alfonso Pérez	Match Report	0	0	Draw	0
2	Sun	2024-08-25	19:15	Alavés	0.2	0-0	1.5	Betis	16,623	Estadio de Mendizorrosa	Match Report	0	0	Draw	0
3	Tue	2024-08-27	19:00	Mallorca	0.9	0-0	0.7	Sevilla	20,470	Estadi Mallorca Son Moix	Match Report	0	0	Draw	0
3	Wed	2024-08-28	19:00	Valladolid	1.1	0-0	0.2	Leganes	21,764	Estadio Municipal José Zorrilla	Match Report	0	0	Draw	0
3	Wed	2024-08-28	21:30	Atlético Madrid	2.3	0-0	0.6	Espanyol	56,669	Riyadh Air Metropolitan Stadium	Match Report	0	0	Draw	0
3	Thu	2024-08-29	20:30	Las Palmas	0.8	1-1	2.5	Real Madrid	31,192	Estadio de Gran Canaria	Mateo Busquets Match Report	1	1	Draw	2
4	Sat	2024-08-31	21:30	Valencia	1.1	1-1	0.5	Villarreal	43,057	Estadio de Mestalla	Jesús Gil Match Report	1	1	Draw	2
4	Sun	2024-09-01	19:15	Getafe	0.6	0-0	0.0	Real Sociedad	10,929	Coliseum Alfonso Pérez	José Luis Munuera Match Report	0	0	Draw	0
6	Sat	2024-09-21	14:00	Valladolid	1.0	0-0	1.4	Real Sociedad	21,171	Estadio Municipal José Zorrilla	Guillermo Cuadra Match Report	0	0	Draw	0
6	Sun	2024-09-22	14:00	Getafe	1.5	1-1	0.6	Leganes	13,060	Coliseum Alfonso Pérez	Adrián Cordero Match Report	1	1	Draw	2
6	Sun	2024-09-22	21:00	Rayo Vallecano	1.7	1-1	0.5	Atlético Madrid	13,646	Estadio del Rayo Vallecano	Mario Melero Match Report	1	1	Draw	2
7	Tue	2024-09-24	19:00	Valencia	0.7	0-0	0.5	Osasuna	40,425	Estadio de Mestalla	Miguel Ángel Ortiz Arias Match Report	0	0	Draw	0
7	Wed	2024-09-25	19:00	Girona	2.0	0-0	0.5	Rayo Vallecano	12,272	Estadi Municipal de Montilivi	Juan Martínez Match Report	0	0	Draw	0
7	Thu	2024-09-26	18:00	Las Palmas	1.0	1-1	1.9	Betis	22,722	Estadio de Gran Canaria	José Sánchez Match Report	1	1	Draw	2
8	Sat	2024-09-28	16:15	Rayo Vallecano	0.9	1-1	0.9	Leganes	13,186	Estadio del Rayo Vallecano	Alejandro Muñoz Match Report	1	1	Draw	2
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22	Sat	2025-02-01	14:00	Getafe	1.0	0-0	0.9	Sevilla	11,730	Coliseum Alfonso Pérez	Ricardo de Burgos Match Report	0	0	Draw	0
22	Sun	2025-02-02	21:00	Betis	1.1	2-2	1.4	Athletic Club	49,292	Estadio Benito Villamarín	Juan Martínez Match Report	2	2	Draw	4
23	Sat	2025-02-08	21:00	Real Madrid	1.6	1-1	1.5	Atlético Madrid	78,082	Estadio Santiago Bernabéu	César Soto Match Report	1	1	Draw	2
23	Mon	2025-02-10	21:00	Mallorca	1.2	1-1	1.5	Osasuna	15,378	Estadi Mallorca Son Moix	Adrián Cordero Match Report	1	1	Draw	2

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Screenshot 5:

Top Scoring Matches:

Wk	Day	Date	Time	Home xG (Home)	Score	xG (Away)	Away Attendance	Venue	Referee	Match Report	Notes	Home Goals	Away Goals	Result	Total Goals
21	Sun	2025-01-26	21:00	Barcelona	4.4	7-1	1.5	Valencia	45,312	Estadi Olímpic Lluís Companys	César Soto Match Report	7	1	Home Win	8
4	Sat	2024-08-31	17:00	Barcelona	4.7	7-0	0.5	Valladolid	44,359	Estadi Olímpic Lluís Companys	Isidro Díaz de Mera Match Report	7	0	Home Win	7
16	Sun	2024-12-08	21:00	Atlético Madrid	2.0	4-3	0.4	Sevilla	60,065	Riyadh Air Metropolitan Stadium	Javier Alberola Match Report	4	3	Home Win	7
18	Sun	2024-12-22	18:30	Leganes	1.2	2-5	3.3	Villarreal	11,034	Estadio Municipal de Butarque	Alejandro Muñoz Match Report	2	5	Away Win	7
12	Sat	2024-11-02	16:15	Girona	2.0	4-3	0.4	Leganes	10,839	Estadi Municipal de Montilivi	Mateo Busquets Match Report	4	3	Home Win	7