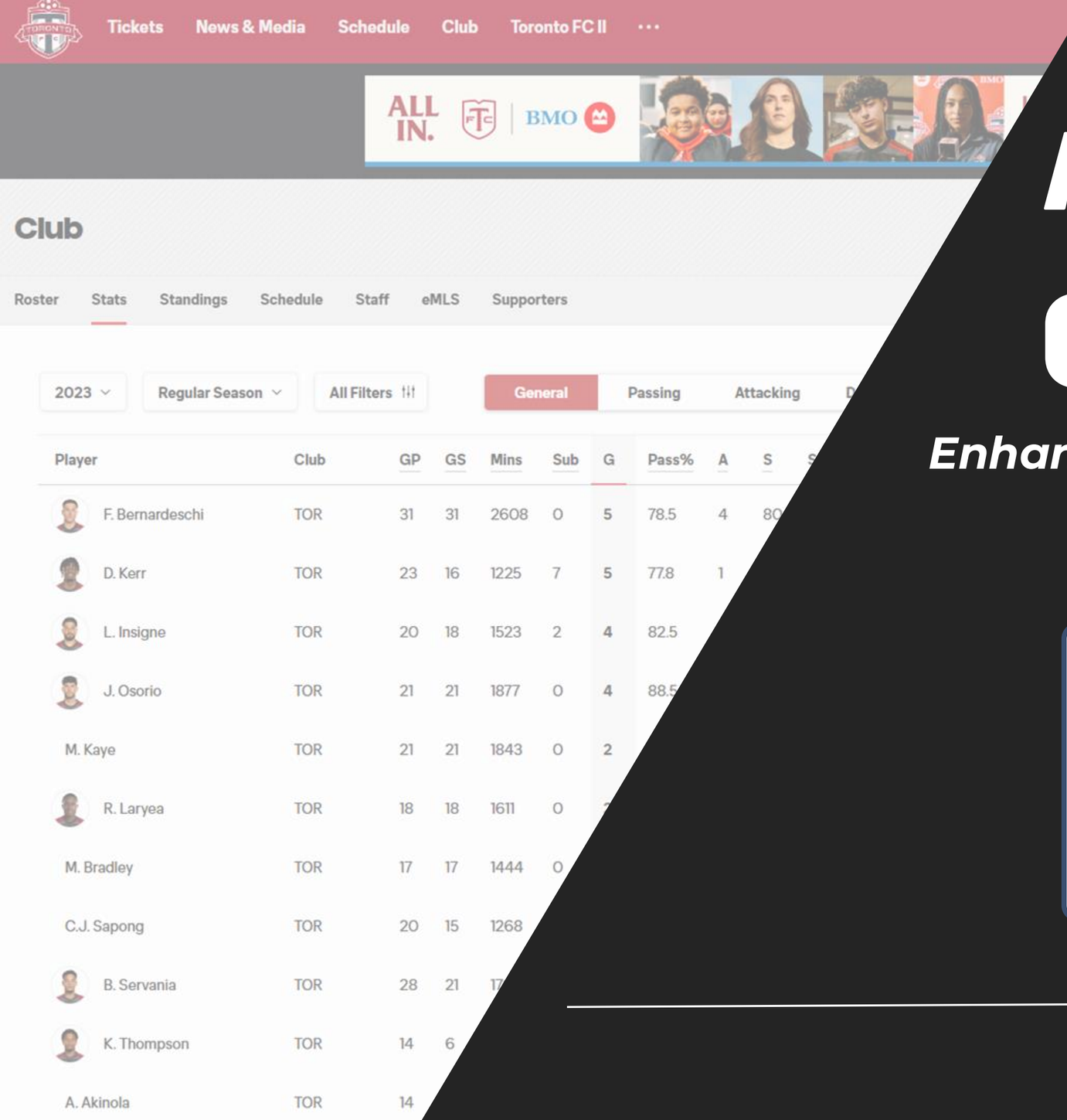

AI-DRIVEN GAME INSIGHTS

Enhancing Strategic Planning with Data

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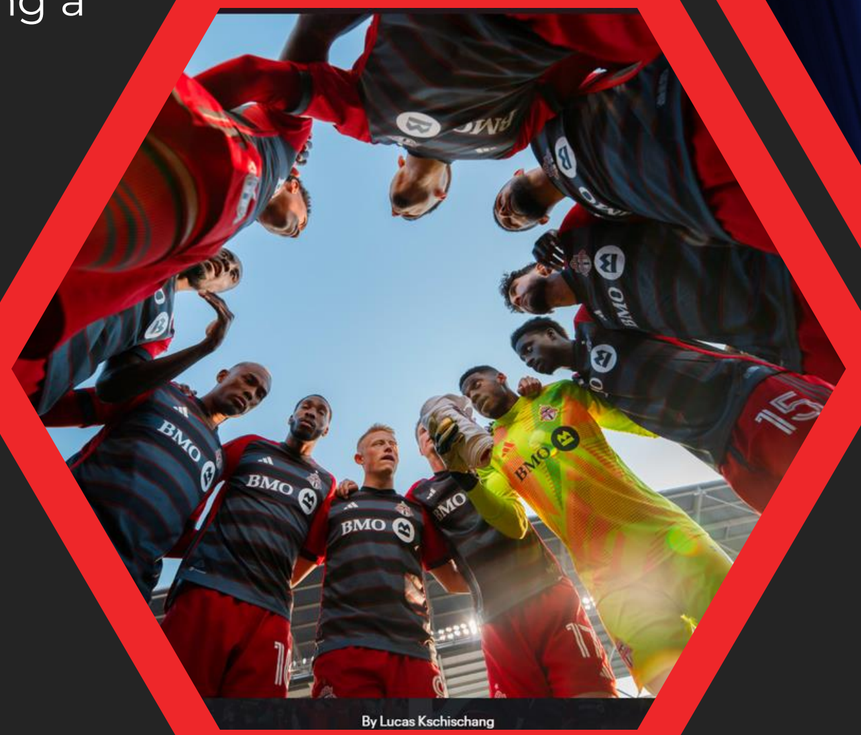
INTRODUCTION

In week 8 we are to identify key features for understanding opponents' playing styles, formations, and tactics in developing a tailored AI solution for
Toronto FC.

Choose a tailored machine-learning model that aligns with the specific needs of Toronto FC.

Present key findings from the identified features and showcase the selected machine learning model, illustrating how these elements can provide the coaching staff with actionable insights into opponents' playing styles.



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TEAM MEMBER

CHIBUIKE OKOROAMA

VENKATA MANISH KATRAGADDA

PRESCILA MORA

MOHAMED AFTHAB

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By Lucas Kschischang

KEY FACTS

GAME WINNING STATISTICS

2024 Season

Toronto FC has an **average**
11 wins
3 draws
16 losses
placing them
8th out of 29 teams in the MLS Table

winning 37% of their matches

CANADIAN CHAMPIONSHIP

2009, 2010, 2011, 2012, 2016, 2017, 2018, 2020

★★★★★ 8 TIMES

SUPPOTER'S SHIELD

Best regular season record

★★★★★ 2017

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OBJECTIVE

IDENTIFY KEY **FEATURES** of Opponents' playing Styles

PICK SPECIFIC **ML** for Toronto FC

PRESENT ACTIONABLE **INSIGHTS** using a tailored machine learning model

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LEVERAGE AI FOR GAME PLAN

Analyze

Formations, key players, and tactical patterns

Predict

Opponents' likely tactics using AI

Tailor

Game strategies to exploit identified weaknesses.

Deliver

Insights during matches for tactical adjustments.

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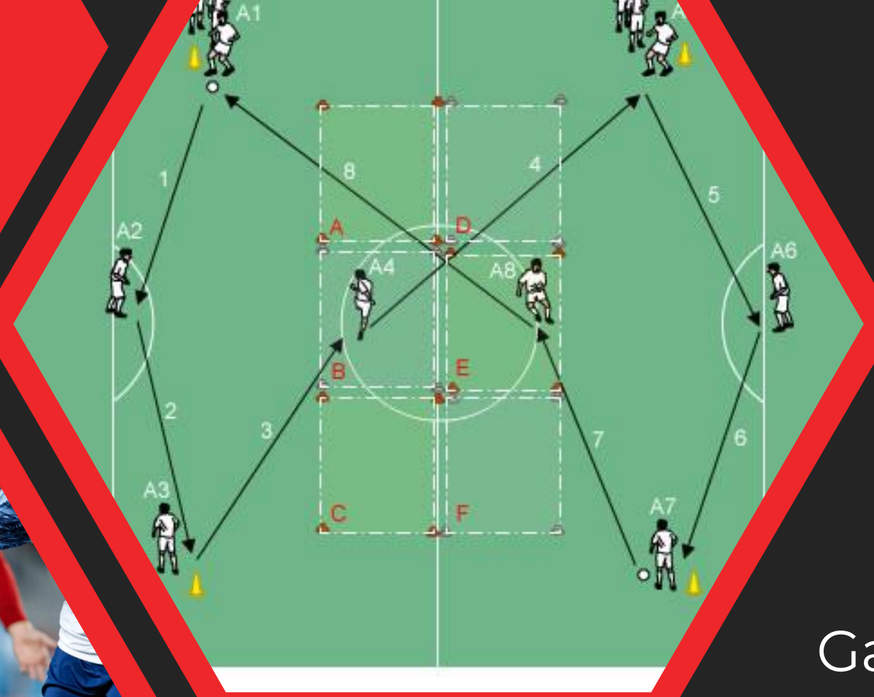
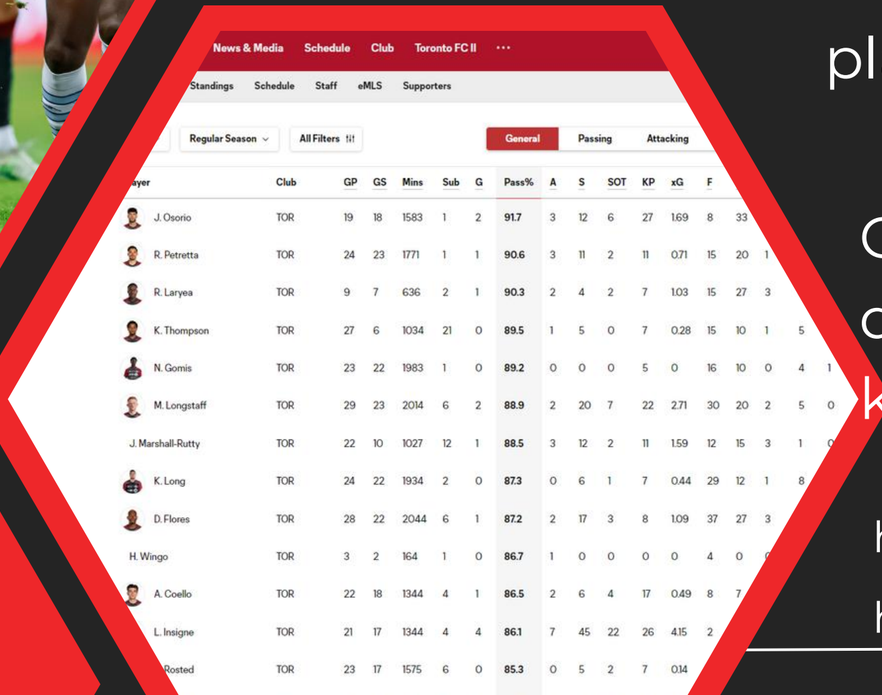
IDENTIFY VALUABLE DATA





News & Media | Schedule | Club | Toronto FC II

Standings | Schedule | Staff | eMLS | Supporters

Regular Season | All Filters | General | Passing | Attacking

Player	Club	GP	GS	Mins	Sub	G	Pass%	A	S	SOT	KP	xG	F	
J. Osorio	TOR	19	18	1583	1	2	91.7	3	12	6	27	1.69	8	33
R. Petretta	TOR	24	23	1771	1	1	90.6	3	11	2	11	0.71	15	20	1
R. Laryea	TOR	9	7	636	2	1	90.3	2	4	2	7	1.03	15	27	3
K. Thompson	TOR	27	6	1034	21	0	89.5	1	5	0	7	0.28	15	10	1	5
N. Gomis	TOR	23	22	1983	1	0	89.2	0	0	0	5	0	16	10	0	4	1
M. Longstaff	TOR	29	23	2014	6	2	88.9	2	20	7	22	2.71	30	20	2	5	0
J. Marshall-Rutty	TOR	22	10	1027	12	1	88.5	3	12	2	11	1.59	12	15	3	1	0
K. Long	TOR	24	22	1934	2	0	87.3	0	6	1	7	0.44	29	12	1	8
D. Flores	TOR	28	22	2044	6	1	87.2	2	17	3	8	1.09	37	27	3
H. Wingo	TOR	3	2	164	1	0	86.7	1	0	0	0	0	4	0	0
A. Coello	TOR	22	18	1344	4	1	86.5	2	6	4	17	0.49	8	7
L. Insigne	TOR	21	17	1344	4	4	86.1	7	45	22	26	4.15	2
Rosted	TOR	23	17	1575	6	0	85.3	0	5	2	7	0.14

Gather data from match statistics and player metrics

Identify historical trends and predictive patterns

Corner Kicks data to identify key patterns

Data comes in both structure and unstructured

https://www.mlssoccer.com/stats/

https://www.torontofc.ca/stats/

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IDENTIFY KEY FEATURES

Player-Level

Team-Level

Match Context

League-wide

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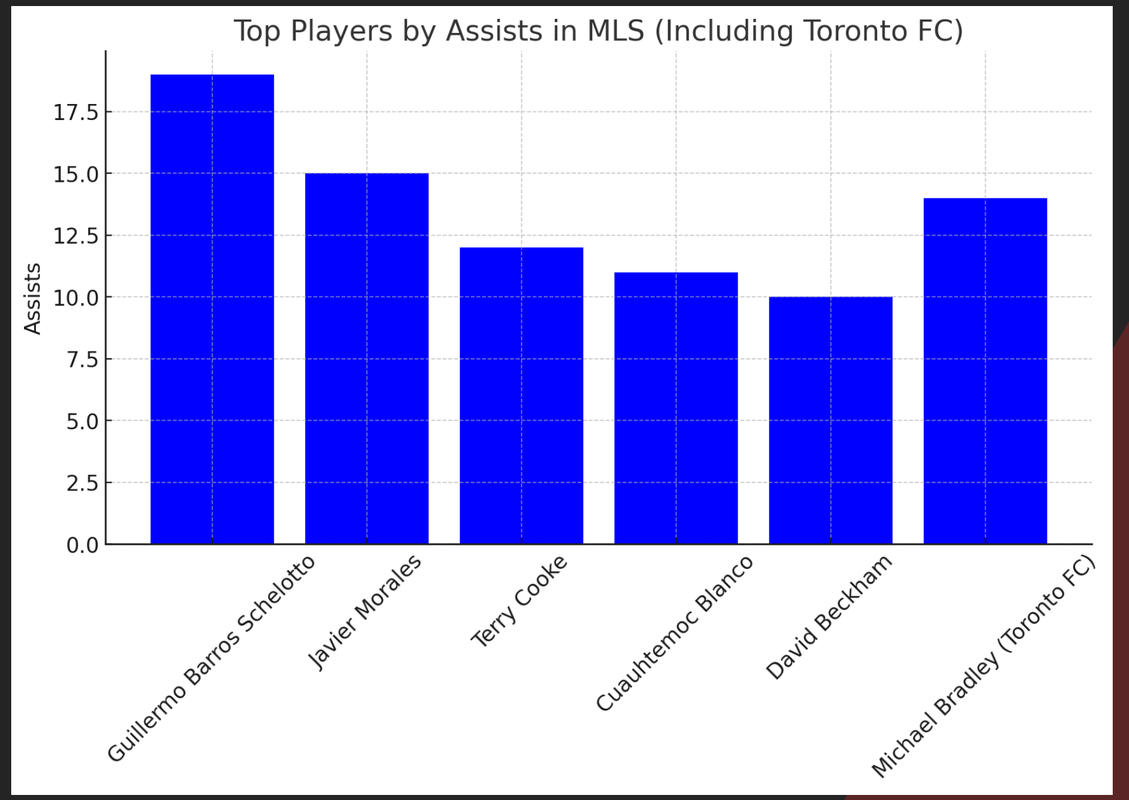
FEATURES

PLAYER-LEVEL

- Assists
- Pass Completion Rate
- Tackles Won
- Shots on Target
- Field Movement
- Speed
- Stamina
- Strength



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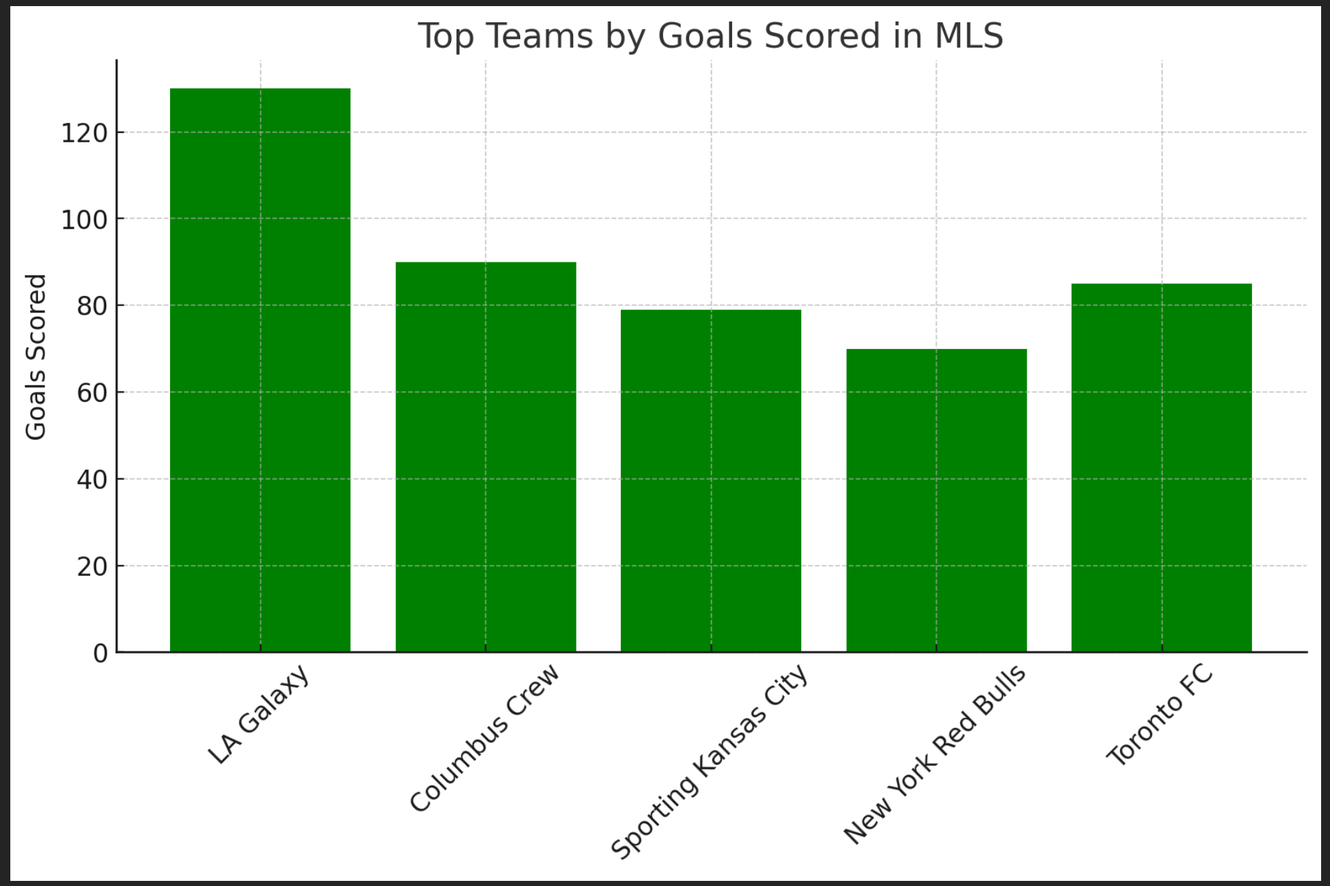
FEATURES



TEAM-LEVEL

- Formation frequency and variations
- Goal Score
- Ball Possession
- Attacking Patterns
- Defensive strategies
- Offensive effectiveness
- Defensive effectiveness

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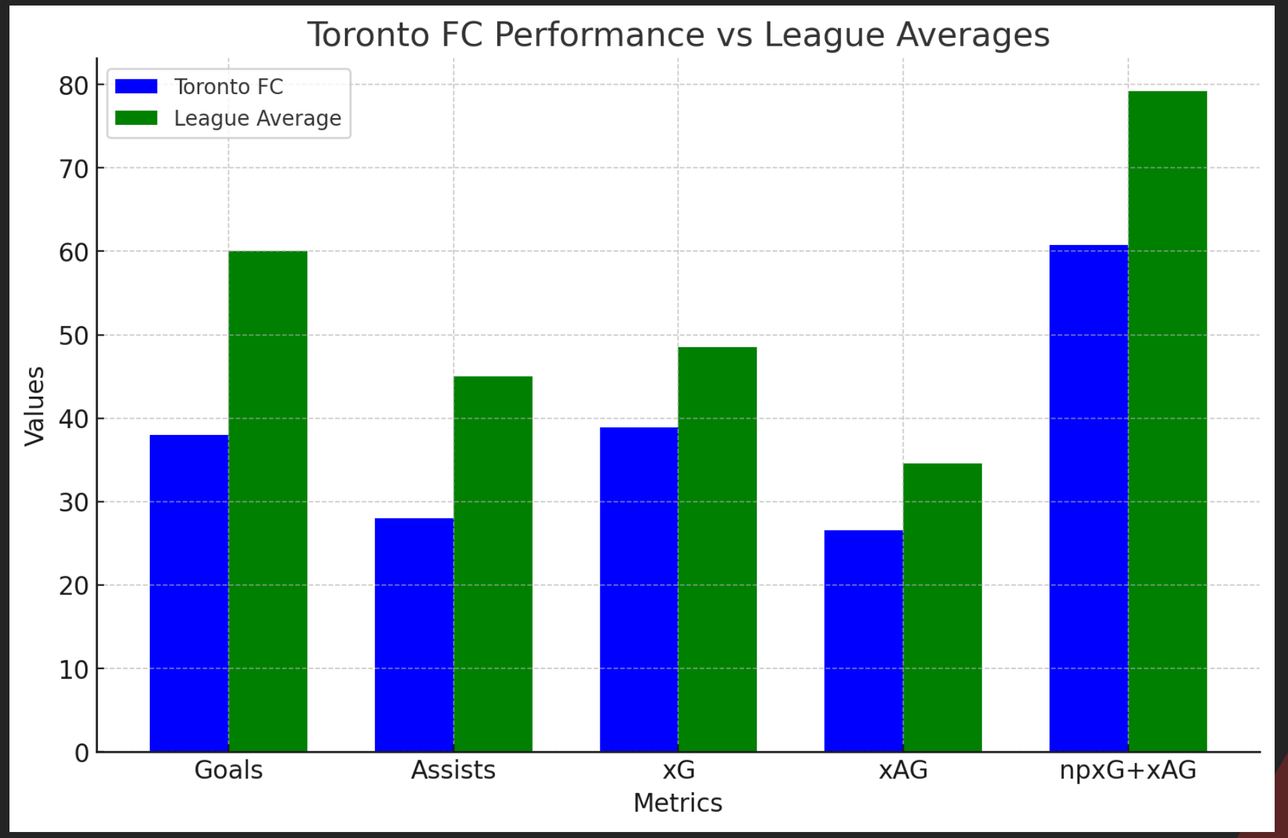
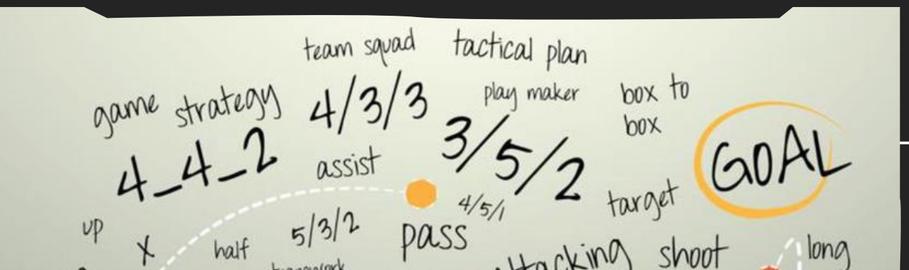
FEATURES

MATCH CONTEXT

- Home/away performance differences
- Performance against different playing styles
- Weather conditions and their impact on team performance
- Time-based performance (e.g., first half vs. second half, performance in final minutes)





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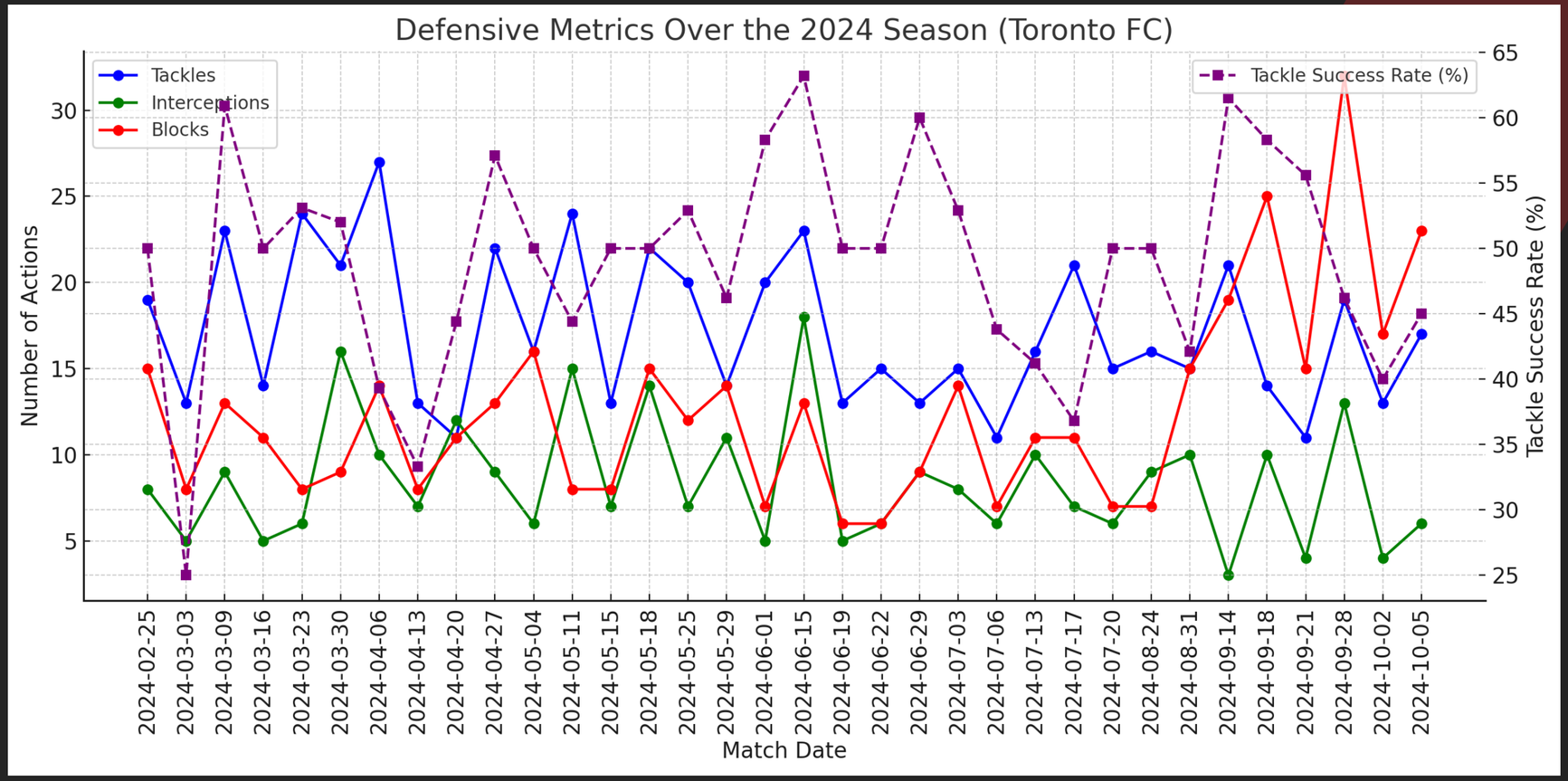
FEATURES

LEAGUE-WIDE



- Formation frequency and variations
- Ball Possession
- Attacking Patterns
- Defensive strategies
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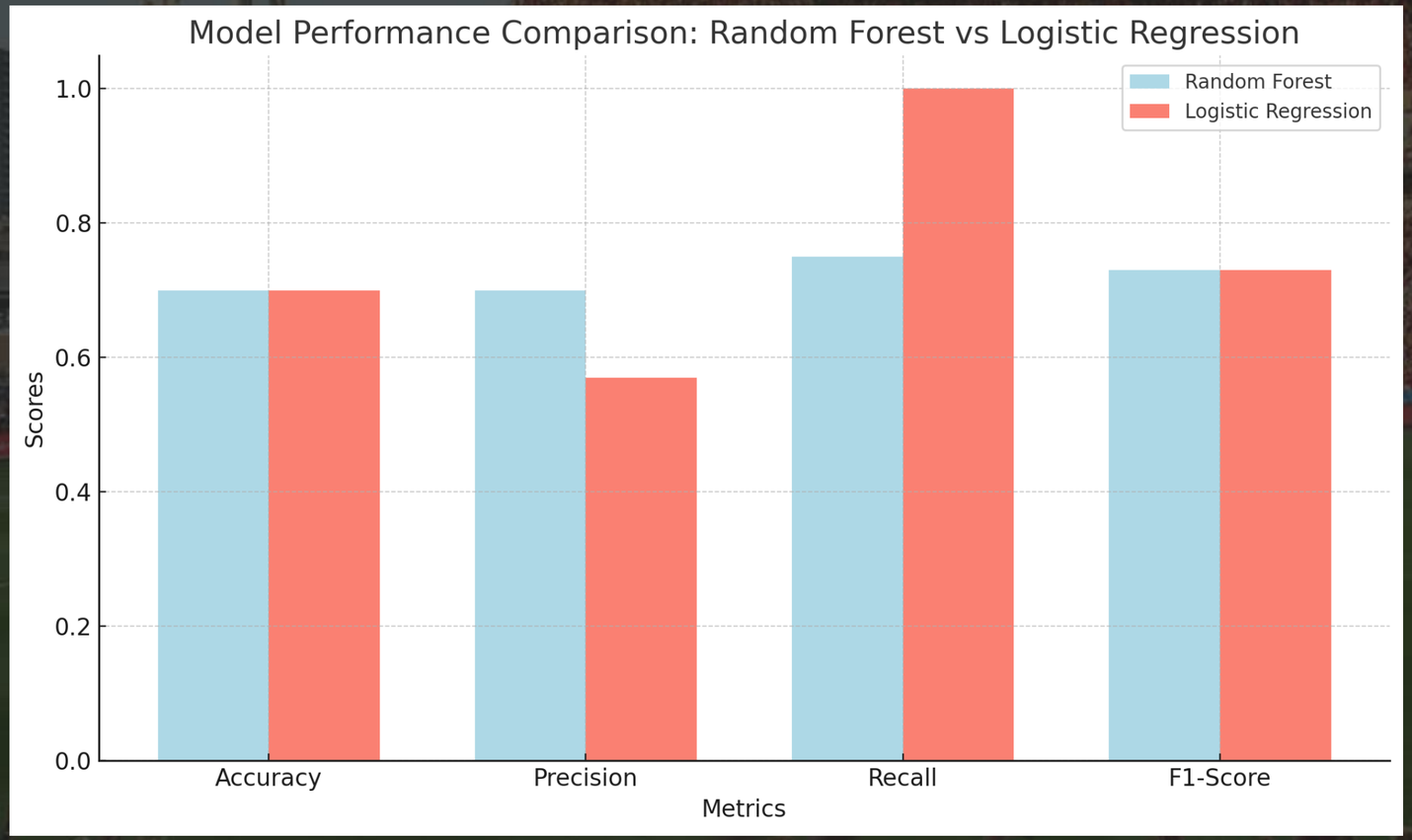
EVALUATE ML



- **Random Forest**
  Consistent performance across all metrics
- **Logistic Regression**
  Strong recall for Loss/Draw, weaker precision
- **Accuracy**
  Both models perform well at 70%
- **Precision (Win)**
  Random Forest outperforms at predicting wins
- **Recall (Loss/Draw)**
  Logistic Regression excels at detecting Loss/Draw

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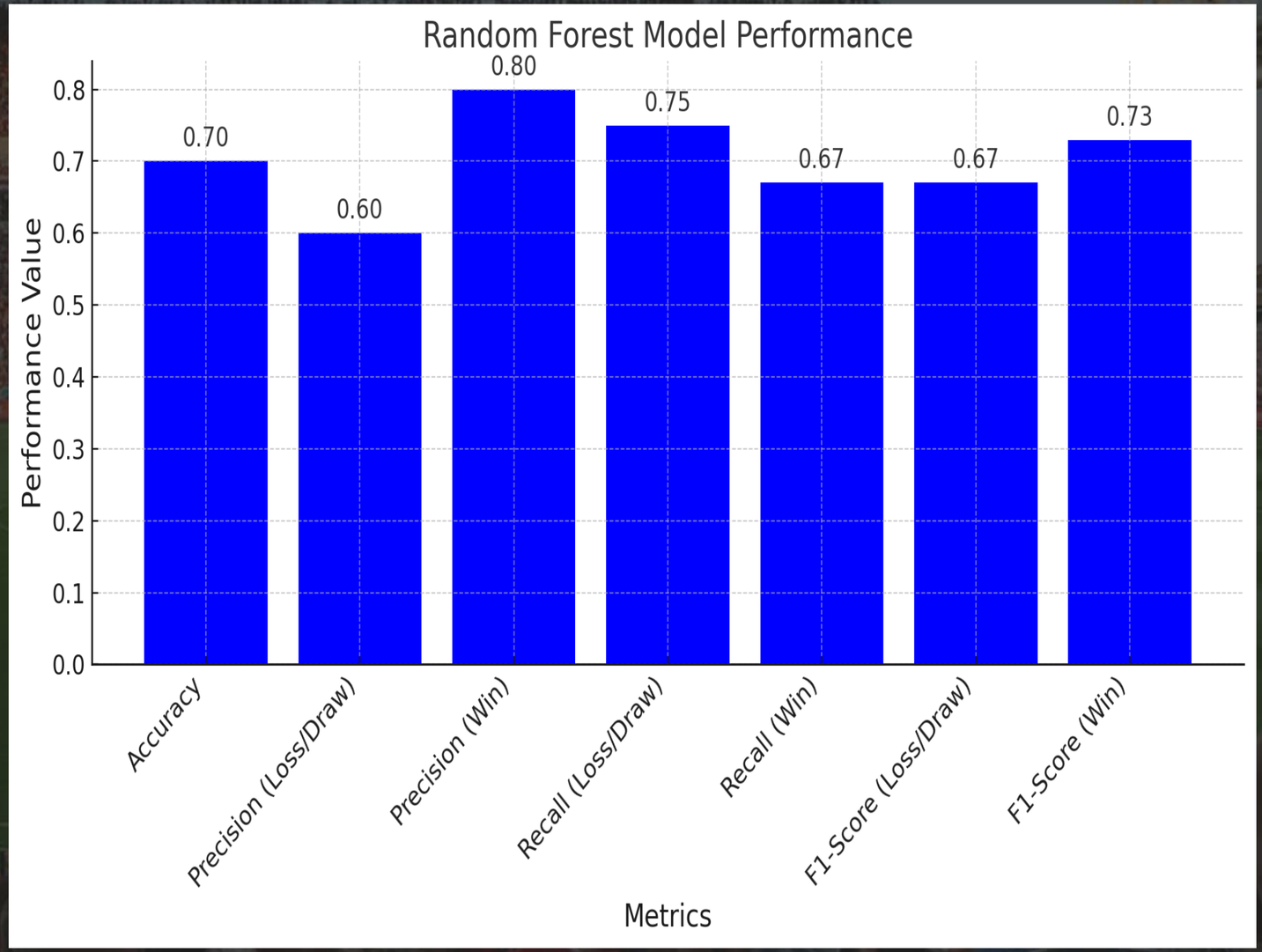
PICK SPECIFIC ML

- **Accuracy**
  Correct 7 out of 10 times
- **Precision (Wins)**
  Strong at predicting wins
- **Precision (Loss/Draw)**
  Moderate accuracy
- **Recall (Wins)**
  Captures most wins
- **Recall (Loss/Draw)**
  Strong at catching Loss/Draw
- **F1-Score (Wins)**
  Reliable for wins
- **F1-Score (Loss/Draw)**
  Reliable for Loss/Draw



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ACTIONABLE INSIGHTS

- Boost Confidence in Winning Plays
- Prepare for Risk
- Balanced Predictions
- Data-Driven Decisions

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CONCLUSION

Toronto FC will have an edge to **win championships** by leveraging advanced analytics to empower AI-driven insights, optimize performance, and stay ahead of the competition

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THANK YOU

REFERENCES

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