

CASE STUDY

Shot success analysis and performance insights using Snowflake and Power BI

Raw vs. Enriched data –

Results (Feb 9, 2:35:32 PM)

Table Chart

#	C1	C2	C3	C4	C5	C6	C7
0		10.0 12.0 +8 more	10.0% 10.0% +8 more	0.0 -10... +7 more	20.0% 10.0% +5 more	0.0 -11... +4 more	30.0% 10.0% +2 more
1	null	match_event_id	location_x	location_y	remaining_min	power_of_shot	knockout
2	0	10.0	167.0	72.0	10.0	1.0	0.0
3	1	12.0	-157.0	0.0	10.0	1.0	0.0
4	2	35.0	-101.0	135.0	7.0	1.0	0.0
5	3	43.0	138.0	175.0	6.0	1.0	0.0
6	4	155.0	0.0	0.0	null	2.0	0.0
7	5	244.0	-145.0	-11.0	9.0	3.0	0.0
8	6	251.0	0.0	0.0	8.0	null	0.0
9	7	254.0	1.0	28.0	8.0	3.0	0.0

Results (Feb 19, 8:07:26 PM)

Table Chart

#	MATCH_EVENT_ID	TEAM_NAME	GAME_SEASON	DATE_OF_GAME	IS_KNOCKOUT_MATCH	H
1	12.0	Manchester United	2000-01	2000-10-31	0	MAN
2	35.0	Manchester United	2000-01	2000-10-31	0	Unkr
3	43.0	Manchester United	2000-01	2000-10-31	0	MAN
4	309.0	Manchester United	2000-01	2000-10-31	0	Unkr
5	4.0	Manchester United	2000-01	2000-11-01	0	MAN
6	80.0	Manchester United	2000-01	2000-11-01	0	MAN
7	138.0	Manchester United	2000-01	2000-11-01	0	MAN
8	255.0	Manchester United	2000-01	2000-11-01	0	MAN
9	274.0	Manchester United	2000-01	2000-11-01	0	MAN
10	307.0	Manchester United	2000-01	2000-11-01	0	MAN

Dashboard insights using Streamlit Snowflake –

app.snowflake.com/njk0js/cz51692/#/streamlit-apps/CASE_STUDY_D8_CASE_STUDY_SCHEMA.KRZ3CU67DG8SLRM

Streamlit Apps analytics_dashboard

Active Share Edit

Shot Success Analysis

Total Shots: 16186 Goal Conversion %: 44.33 Avg Shot Distance: 33.49

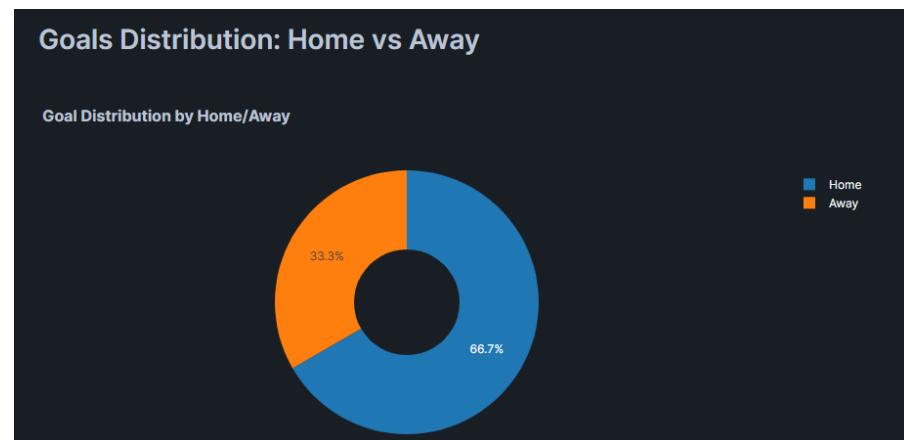
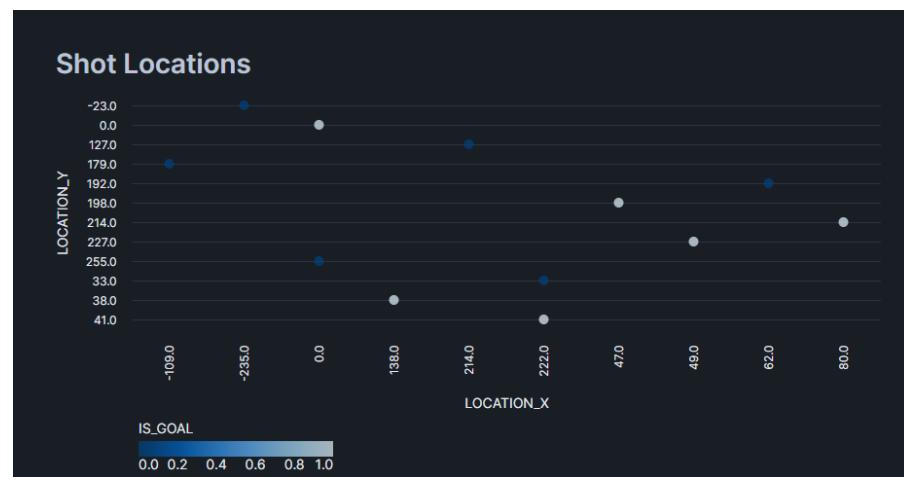
Total Shots: 101 Goal Conversion %: 39.6 Avg Shot Distance: 34.81

Filters

Shot Type: shot - 10 Knockout Match: 0

Preview of Data

MATCH_EVENT_ID	TEAM_NAME	GAME_SEASON	DATE_OF_GAME	IS_KNOCKOUT
0 12.0	Manchester United	2000-01	2000-10-31	
1 35.0	Manchester United	2000-01	2000-10-31	
2 43.0	Manchester United	2000-01	2000-10-31	
3 244.0	Manchester United	None	2000-10-31	



Dashboard insights using Power BI –

Power BI Home Screen:

The dashboard displays several key metrics and visualizations:

- Total shots:** 18
- Goals Scored:** 3.00
- Missed Goals:** 15.00
- Goal Conversion %:** 16.67
- avg_shot...**: 45.28
- Goal Conversion % by Year:** A line chart showing conversion rates from 2000 to 2015.
- Goal Conversion % by Time Pressure:** A bar chart comparing conversion rates for 5-15 Minutes and Last 5 Minutes.
- Goal Conversion % by AREA_OF_SHOT:** A bar chart showing conversion rates for Right Side, Left Side, Center(C), Right Side, and Unknown areas.
- Map:** A map of the United States showing locations of goals scored by team name and latitude/longitude.

Power BI Model View:

The data model consists of the following tables and their relationships:

- Dim_HomeAway**: HOME_OR_AWAY
- Dim_KnockoutMatch**: IS_KNOCKOUT_MATCH
- Dim_AreaShot**: AREA_OF_SHOT
- Fact_Table**: AREA_OF_SHOT, HOME_OR_AWAY, IS_KNOCKOUT_MATCH, RANGE_OF_SHOT, SHOT_BASICS, SHOT_TYPE, TFAM_NAMF
- Dim_ShotBasics**: SHOT_BASICS
- Dim_ShotRange**: RANGE_OF_SHOT
- Dim_ShotType**: SHOT_TYPE
- Dim_Team**: TEAM_NAME

Relationships:

- Dim_HomeAway → Fact_Table (1 to *)
- Dim_KnockoutMatch → Fact_Table (1 to *)
- Dim_AreaShot → Fact_Table (1 to *)
- Dim_ShotBasics ← Fact_Table (AREA_OF_SHOT) (1 to 1)
- Dim_ShotRange ← Fact_Table (HOME_OR_AWAY) (1 to 1)
- Dim_ShotType ← Fact_Table (IS_KNOCKOUT_MATCH) (1 to 1)
- Dim_ShotType ← Fact_Table (RANGE_OF_SHOT) (1 to 1)
- Dim_ShotType ← Fact_Table (SHOT_BASICS) (1 to 1)
- Dim_ShotType ← Fact_Table (SHOT_TYPE) (1 to 1)
- Dim_Team ← Fact_Table (TEAM_NAME) (1 to 1)

Properties pane:

- Relationships (7):** Fact_Table[AREA_OF_SHOT] <-> Dim_ShotRange, Fact_Table[HOME_OR_AWAY] <-> Dim_ShotType, Fact_Table[IS_KNOCKOUT_MATCH] <-> Dim_ShotType, Fact_Table[RANGE_OF_SHOT] <-> Dim_ShotType, Fact_Table[SHOT_BASICS] <-> Dim_ShotType, Fact_Table[SHOT_TYPE] <-> Dim_ShotType, Fact_Table[TEAM_NAME] <-> Dim_Team
- Tables (9):** analytics_dashboard, Dim_AreaShot, Dim_HomeAway, Dim_KnockoutMatch, Dim_ShotBasics, Dim_ShotRange, Dim_ShotType, Dim_Team