datalab

Hi there, My name is Liam Potter and I have been a Liverpool fan for the last 21 Years of my life.

Not that I had much choice, my father is a die-hard red.

I want to find what aspect of our game most commonly correlates with wins in UEFA Cup games.

Now I love my Club and as of writing, Liverpool is the greatest club in the country, sorry Trent. Though this data is from 2020-22.

So firstly lets see all of their games and some important metrics.

❄ Soccer   DataFrame as

```sql
SELECT STAGE, TEAM_NAME_HOME AS home_team, TEAM_NAME_AWAY AS away_team, TEAM_HOME_SCORE AS home_goals, TEAM_AWAY_SCORE AS
away_goals
FROM SOCCER.TBL_UEFA_2022
WHERE TEAM_NAME_HOME = 'Liverpool'
   OR TEAM_NAME_AWAY = 'Liverpool'
UNION ALL
SELECT STAGE, TEAM_NAME_HOME AS home_team, TEAM_NAME_AWAY AS away_team, TEAM_HOME_SCORE AS home_goals, TEAM_AWAY_SCORE AS
away_goals
FROM SOCCER.TBL_UEFA_2021
WHERE TEAM_NAME_HOME = 'Liverpool'
   OR TEAM_NAME_AWAY = 'Liverpool'
UNION ALL
SELECT STAGE, TEAM_NAME_HOME AS home_team, TEAM_NAME_AWAY AS away_team, TEAM_HOME_SCORE AS home_score, TEAM_AWAY_SCORE AS
away_goals
FROM SOCCER.TBL_UEFA_2020
WHERE TEAM_NAME_HOME = 'Liverpool'
   OR TEAM_NAME_AWAY = 'Liverpool'
     ORDER BY CASE
              WHEN home_team = 'Liverpool' THEN home_goals
              ELSE away_goals
           END, STAGE;
```

	STAGE	HOME_TEAM	AWAY_TEAM	H...	A...
0	Final	Liverpool	Real Madrid	0	1
1	Round of 16 second leg	Real Madrid	Liverpool	1	0
2	Round of 16 second leg	Liverpool	Inter	0	1
3	Group stage: Matchday 1	Napoli	Liverpool	4	1
4	Group stage: Matchday 5	Liverpool	FC Porto	1	0
5	Group stage: Matchday 2	Liverpool	Ajax	2	1
6	Group stage: Matchday 3	Liverpool	Rangers	2	0
7	Group stage: Matchday 4	Liverpool	Atlético de Madrid	2	0
8	Group stage: Matchday 6	Liverpool	Napoli	2	0
9	Group stage: Matchday 6	Milan	Liverpool	1	2
10	Round of 16 first leg	Liverpool	Real Madrid	2	5
11	Round of 16 first leg	Inter	Liverpool	0	2
12	Semi-finals first leg	Liverpool	Villarreal	2	0
13	Group stage: Matchday 3	Atlético de Madrid	Liverpool	2	3
14	Group stage: Matchday 5	Ajax	Liverpool	0	3
15	Quarter-finals first leg	Benfica	Liverpool	1	3

Rows: 20   ⤢ Expand

Well, there are our key information points, it's a hell of a shame that we lost the Final to Real Madrid, but why could that be? First, let's find our metrics on the final.

❄ Soccer   DataFrame as

```sql
SELECT *
FROM SOCCER.TBL_UEFA_2021
WHERE STAGE = ' Final ';
```

			DATE		PENS_HO...	PENS_AW...	TEAM_N...	TEAM_N...
0	Final		2022-05-29T00:00:00.000	FALSE	FALSE	FALSE	Liverpool	Real Madrid

Rows: 1   ⤢ Expand

Possession was almost equal. We took 20 more shots with 12 more on target! We won about half as many duels. And played at Anfield. And yet we lost...

Data would suggest then that losing duels was our downfall. Let's test if the rest of our dataset agrees with this.

✳ Soccer   DataFrame as

```sql
SELECT
    TEAM_NAME_HOME AS home_team,
    TEAM_NAME_AWAY AS away_team,
    DUELS_WON_HOME AS home_duels_won,
    DUELS_WON_AWAY AS away_duels_won,
    CASE
        WHEN TEAM_NAME_HOME = 'Liverpool' AND TEAM_HOME_SCORE > TEAM_AWAY_SCORE THEN 'Liverpool Won'
        WHEN TEAM_NAME_AWAY = 'Liverpool' AND TEAM_AWAY_SCORE > TEAM_HOME_SCORE THEN 'Liverpool Won'
        ELSE 'Liverpool Did Not Win'
    END AS liverpool_result
FROM
    SOCCER.TBL_UEFA_2022
WHERE
    TEAM_NAME_HOME = 'Liverpool'
    OR TEAM_NAME_AWAY = 'Liverpool'

UNION ALL

SELECT
    TEAM_NAME_HOME AS home_team,
    TEAM_NAME_AWAY AS away_team,
    DUELS_WON_HOME AS home_duels_won,
    DUELS_WON_AWAY AS away_duels_won,
    CASE
        WHEN TEAM_NAME_HOME = 'Liverpool' AND TEAM_HOME_SCORE > TEAM_AWAY_SCORE THEN 'Liverpool Won'
        WHEN TEAM_NAME_AWAY = 'Liverpool' AND TEAM_AWAY_SCORE > TEAM_HOME_SCORE THEN 'Liverpool Won'
        ELSE 'Liverpool Did Not Win'
    END AS liverpool_result
FROM
    SOCCER.TBL_UEFA_2021
WHERE
    TEAM_NAME_HOME = 'Liverpool'
    OR TEAM_NAME_AWAY = 'Liverpool'

UNION ALL

SELECT
    TEAM_NAME_HOME AS home_team,
    TEAM_NAME_AWAY AS away_team,
    DUELS_WON_HOME AS home_duels_won,
    DUELS_WON_AWAY AS away_duels_won,
    CASE
        WHEN TEAM_NAME_HOME = 'Liverpool' AND TEAM_HOME_SCORE > TEAM_AWAY_SCORE THEN 'Liverpool Won'
        WHEN TEAM_NAME_AWAY = 'Liverpool' AND TEAM_AWAY_SCORE > TEAM_HOME_SCORE THEN 'Liverpool Won'
        ELSE 'Liverpool Did Not Win'
    END AS liverpool_result
FROM
    SOCCER.TBL_UEFA_2020
WHERE
    TEAM_NAME_HOME = 'Liverpool'
    OR TEAM_NAME_AWAY = 'Liverpool'

ORDER BY
    liverpool_result DESC,
    home_duels_won DESC,
    away_duels_won DESC;
```
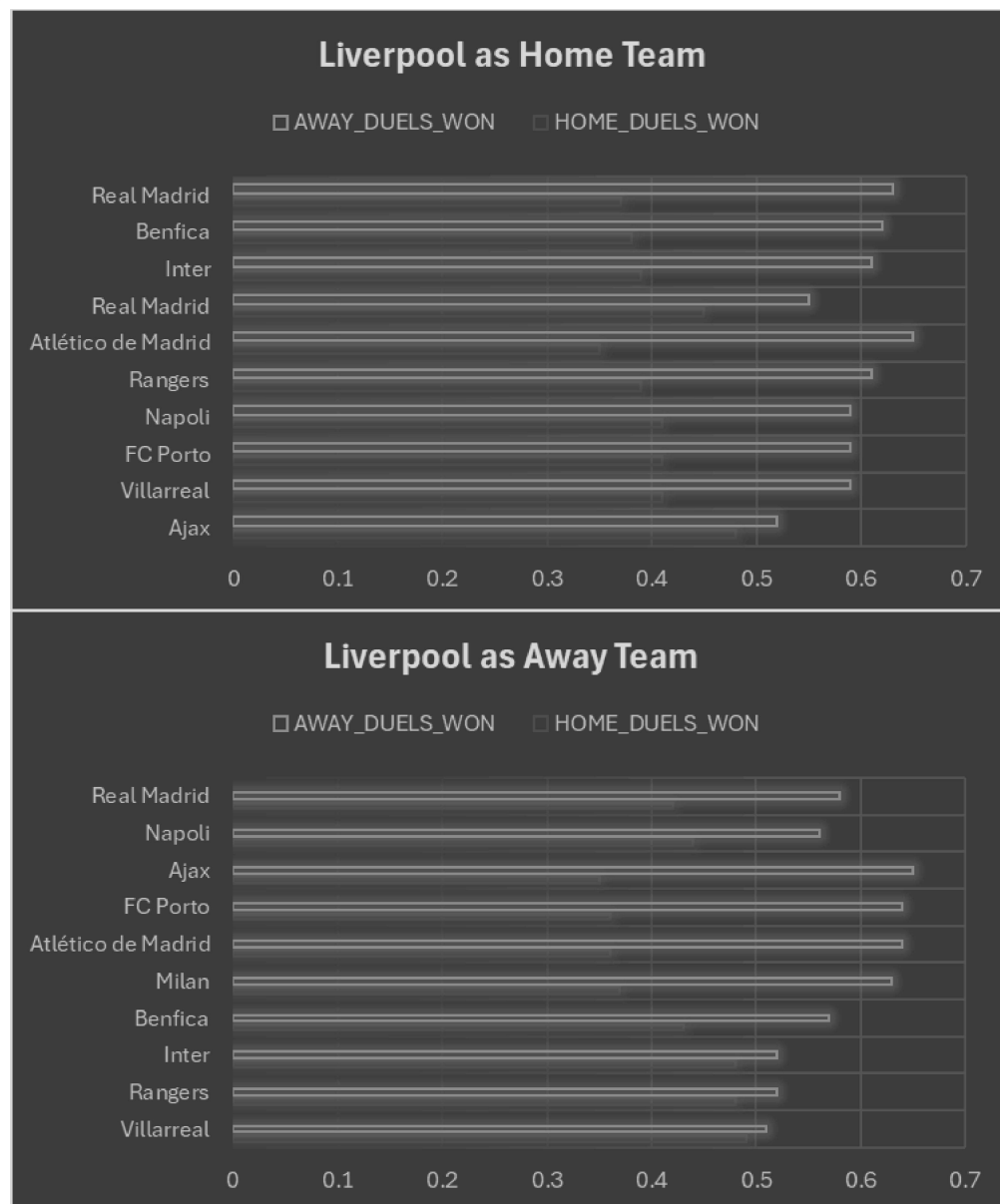
	HOME_TEAM	AWAY_TEAM	HOME_...	AWAY_D...	LIVERPOOL_RESULT
0	Villarreal	Liverpool	0.49	0.51	Liverpool Won
1	Liverpool	Ajax	0.48	0.52	Liverpool Won
2	Rangers	Liverpool	0.48	0.52	Liverpool Won
3	Inter	Liverpool	0.48	0.52	Liverpool Won
4	Benfica	Liverpool	0.43	0.57	Liverpool Won
5	Liverpool	Villarreal	0.41	0.59	Liverpool Won
6	Liverpool	FC Porto	0.41	0.59	Liverpool Won
7	Liverpool	Napoli	0.41	0.59	Liverpool Won
8	Liverpool	Rangers	0.39	0.61	Liverpool Won
9	Milan	Liverpool	0.37	0.63	Liverpool Won
10	Atlético de Madrid	Liverpool	0.36	0.64	Liverpool Won
11	FC Porto	Liverpool	0.36	0.64	Liverpool Won
12	Ajax	Liverpool	0.35	0.65	Liverpool Won

13	Liverpool	Atlético de Madrid	0.35	0.65	Liverpool Won
14	Liverpool	Real Madrid	0.45	0.55	Liverpool Did Not Win
15	Napoli	Liverpool	0.44	0.56	Liverpool Did Not Win

Rows: 20   ⤢ Expand

Great, Now lets move this data to try to find some Insights.

Firstly we see that Liverpool regardless of home or away play very consistently. Liverpool rarely has more success in duels even against lower quality teams. Klopp likely focuses on other methods of scoring than individual brilliance

This table now shows us how duels won correlate with wins and losses across all years. This data is significant and gives us insight into what may be causing us to lose many matches. Further analysis could look into why our players are beating some teams 1 on 1 and not others both for defenders and attackers.

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# Overall then we would consult Liverpool FC to focus more completely at 1-on-1 interactions to improve the form of our team,
and get us into a few more finals.

I hope you have enjoyed reading.
- By Liam Potter
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