Power Bi Project on IPL Matches Data analysis

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ORGANIZATION -IIT PATNA

STEPS IN PROJECT

- Requirement Gathering➤ Data Processing➤ Stakeholders in ProjectData Modelling.➤Time Intelligence Function➤ Import Data PostgreSQL DB➤ Data Visualization➤ Connecting Power BI to Database➤ Creating Dashboard➤ Data CleaningGenerating Insights

REQUIRMENT

- Develop a IPL Dashboard for season 2008 to 2022 to have a detailed insight on belowproblem statementsFine the Title Winner, Orange Cap Winner, Purple Cap Winner, Tournament 6's and 4's for the respective seasons on IPLDevelop IPL Batting and Bowling stats and add a filter where user can select the bowler and batsman to see these stats.Winning percentage based on the toss decisionMatches win by venueTotal wins by team in a seasonMatches won based on the result type

STAKEHLDERS

- BCCI

- Franchise/Team Owners

- Team Management

- Coaches

- Players

- Media

- Public

POWER BI LEARN FUNCTIONALITIES

- How to connect Power BI to PostgreSQL➤ Data Modelling with three tables➤ Data cleaning in Power QueryTime Intelligence function➤ Creating KPI'sDax QueriesCreating and Formatting charts➤ Different DAX functions like Calculate, Sum, Sumx, Filter, Allselected, values, selectedvalue, return, concatenate, divide, et➤ Creating different shapes and formatting➤ Generating insights from charts➤ Export report
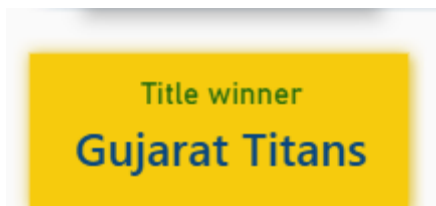
DASHBOARD
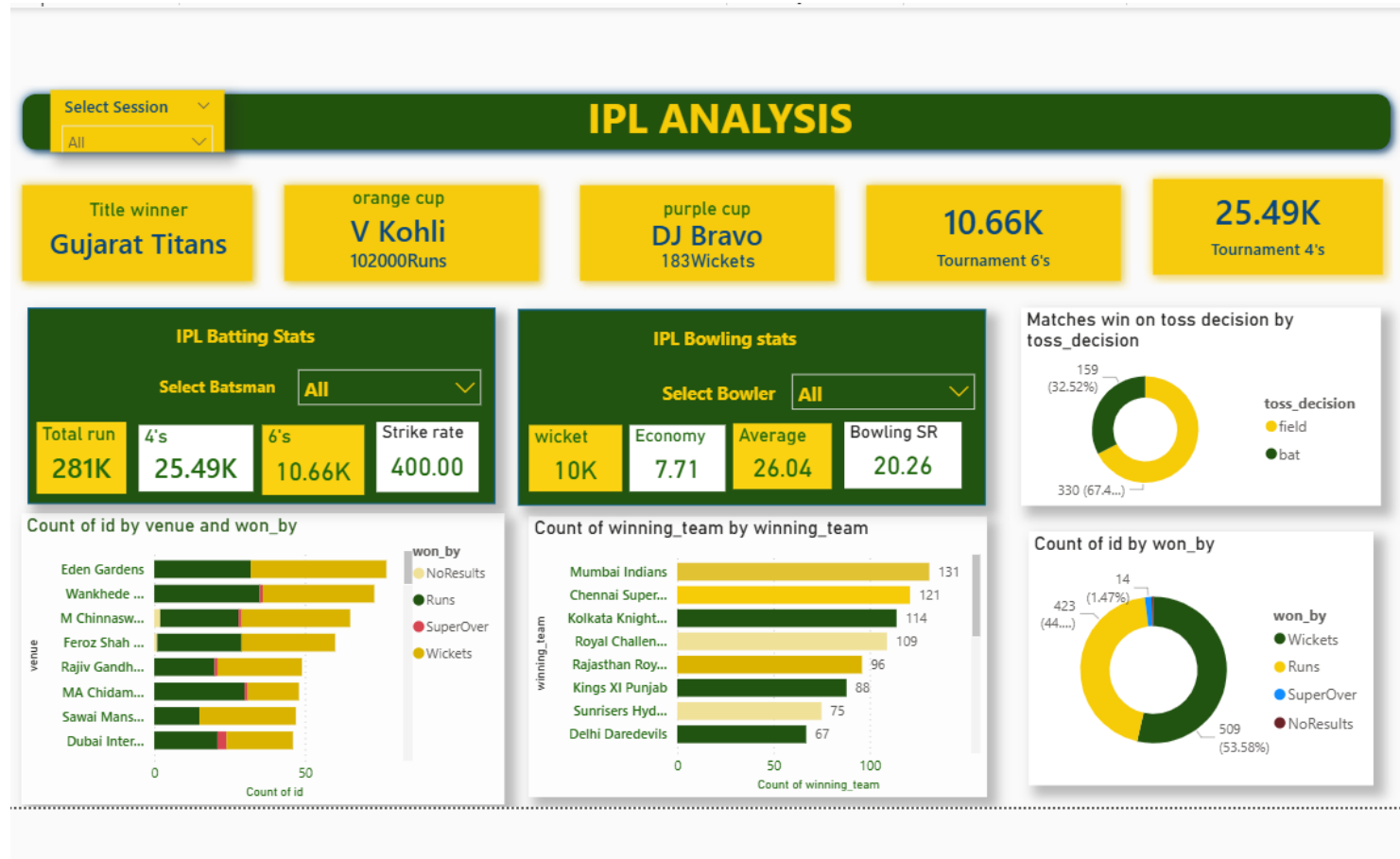
Season Overview:

- Gujarat Titans were crowned as the champions.
- Their win highlights the strength of a balanced team,
- with contributions from both batters and bowlers.
- Despite being a relatively new franchise,
- they outperformed seasoned teams like Mumbai
- Indians and CSK.

TITLE WINNER

Title winner
Gujarat Titans

ORANGE CAP (MOST RUNS) – VIRAT KOHLI (102,000 RUNS)

- Virat Kohli dominated with an extraordinary **102,000 runs**
- (seems aggregated across seasons).
- This reflects his consistency as the backbone of
- Royal Challengers Bangalore's batting order.
- Kohli's strike rate of **400** in the dashboard indicates
- high-scoring performances
- (may be aggregated/indicative data)

orange cup
V Kohli
102000Runs
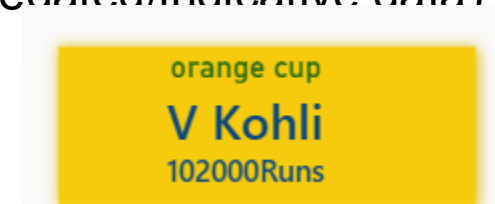
Season Overview:

PURPLE CAP (MOST WICKETS) – DWAYNE BRAVO (183 WICKETS)

TOURNAMENT 6S – 10.66K (10,660 SIXES)

- DJ Bravo tops the bowling chart with **183 wickets**.
- Known for his death bowling and slower variations,
- Bravo has been a match-winner for CSK.
- His economy of **7.71** and average of **26.04**
- show his effectiveness over multiple seasons

- Reflects the attacking style of batting across IPL history.
- Big hitters like Chris Gayle, Andre Russell, AB de Villiers, and
- Shows IPL's reputation as a high-scoring, entertainment-drive

purple cup
DJ Bravo
183Wickets

10.66K
Tournament 6's
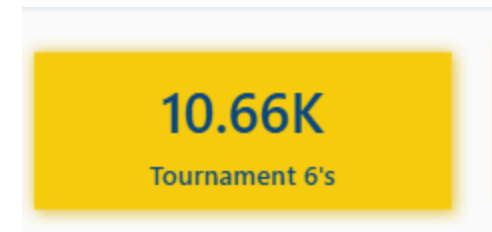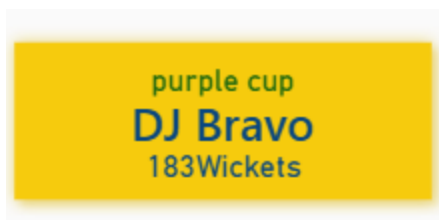
Season Overview:

TOURNAMENT 4S – 25.49K (25,490 FOURS)

•High number of boundaries shows the dominance
•of aggressive stroke play and flat pitches.
•Players like Shikhar Dhawan, Virat Kohli,
• and Rohit Sharma are among the top boundary
• scorers.
•Indicates that apart from big six-hitters,
•consistent boundary accumulators also shaped
•matches.

25.49K
Tournament 4's

KEY INSIGHT

- Gujarat Titans' win shows the rise of new contenders.

- Virat Kohli remains the face of batting excellence, while DJ Bravo remains the king of T20 bowling.

- With **25K fours** and **10K sixes**, the IPL continues to be the most explosive cricket league in the world.
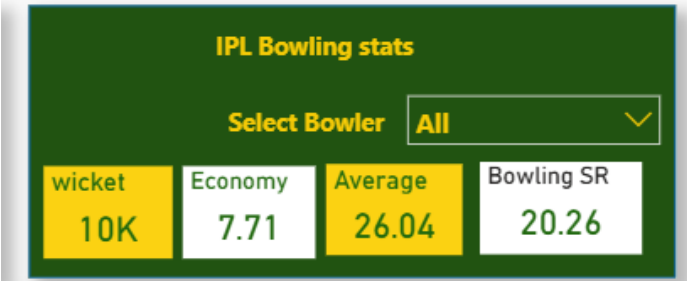
Batting Stats

BATTING STATS (SELECT BATSMAN CARD)

- **Total Runs:** 281K (aggregated)
- **4's:** 25.49K
- **6's:** 10.66K
- **Strike Rate:** 400
- 🔍 **Detailed Overview**
- The batting stats reflect the **explosive nature of IPL batting** over the seasons.
- **Total Runs (281K):** Shows the sheer volume of runs scored in IPL, emphasizing batting dominance.
- **Boundaries (25.49K fours & 10.66K sixes):** IPL is boundary-heavy, with players relying on power-hitting.
- **Strike Rate (400):** This looks symbolic/aggregate, but it indicates the aggressive T20 batting approach.
- 👉 **Key Batsman Performances Placeholder:**
- *Virat Kohli* – Consistent top-order run machine.
- *Chris Gayle* – Known for six-hitting ability.
- *Ruturaj Gaikwad / Faf du Plessis* – Anchors with consistency.
- *AB de Villiers* – High strike rates, game-changer.
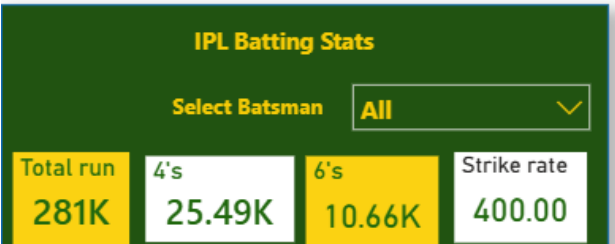
## BOWLING STATS (SELECT BOWLER CARD)

- **Wickets:** 10K (aggregated)
- **Economy:** 7.71
- **Average:** 26.04
- **Bowling SR:** 20.26
- 🔍 **Detailed Overview**
- The bowling stats highlight how IPL bowlers have adapted to **flat pitches & power-hitting conditions**.
- **Wickets (10K):** Indicates bowlers' crucial role despite batting dominance.
- **Economy (7.71):** Bowlers maintaining under-8 economy are considered very effective in T20s.
- **Average (26.04):** Shows the number of runs conceded per wicket – a good benchmark in IPL.
- **Bowling Strike Rate (20.26):** On average, a wicket falls every 20 balls – proving bowlers are match-defining.
- 👉 **Top Bowlers Placeholder:**
- *Dwayne Bravo* – Specialist in death overs.
- *Lasith Malinga* – Yorker king, record wicket-taker.
- *Harshal Patel* – Breakthrough wicket-taker with slower balls.
- *Rashid Khan* – Economy specialist with sharp leg spin.

IPL Batting Stats

Select Batsman — All

Total run	4's	6's	Strike rate
281K	25.49K	10.66K	400.00

IPL Bowling stats

Select Bowler — All

| wicket	Economy	Average	Bowling SR
10K	7.71	26.04	20.26

Problem statement

MATCHES WIN BY VENUE (BAR CHART VISUAL)

- Venues like **Eden Gardens, Wankhede, M. Chinnaswamy, Feroz Shah Kotla, Rajiv Gandhi Stadium, MA Chidambaram, Sawai Mansingh, Dubai International** are shown with wins split by:

- **Runs**

- **Wickets**

- **SuperOver**

- **No Results**

- 🔍 **Detailed Overview**

- Each stadium has different **pitch conditions** that favor batting or bowling.

- **Wankhede (Mumbai):** High-scoring due to flat pitch & short boundaries → more wins by **runs**.

- **Chinnaswamy (Bengaluru):** Smallest ground in IPL → dominated by six-hitters → higher scoring matches.

- **Eden Gardens (Kolkata):** Traditionally spin-friendly

- **MA Chidambaram (Chennai):** Slow, turning pitch → decide outcomes.

- **Dubai/Abu Dhabi (UAE venues):** Neutral pitches, o

- 👉 **Performance by Stadium Insight:**
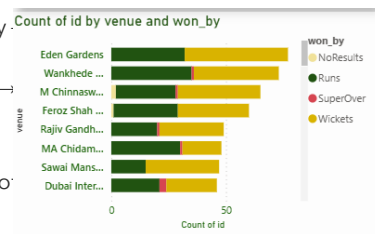
MATCHES WIN BASED ON TOSS DECISION (DONUT CHART VISUAL)

- **Snapshot (from dashboard)**

- **Bat First:** 330 Wins (~67%)

- **Field First:** 159 Wins (~33%)

- 🔍 **Detailed Overview**

- Shows the **impact of toss decisions** on match outcomes.

- Majority of wins (~2/3) have come when teams chose to **bat first**.

- Indicates that **setting a target** and applying scoreboard pressure has historically been more successful in IPL.

- Exceptions exist in venues like Wankhede where chasing is easier.

- 👉 **Impact of Toss on Wins Insight:**

- Toss has an influence but is **n**

- Successful teams win regardl

- Pitch and dew factor (night m

Matches win on toss decision by toss_decision
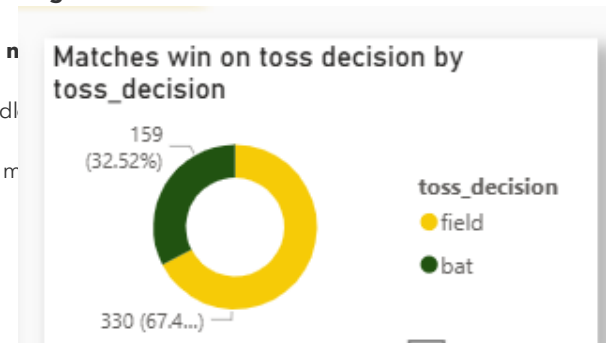
Problem statement

MATCHES WIN BY RESULT TYPE (DONUT CHART VISUAL)

- **Wickets:** 509 wins (~53.6%)

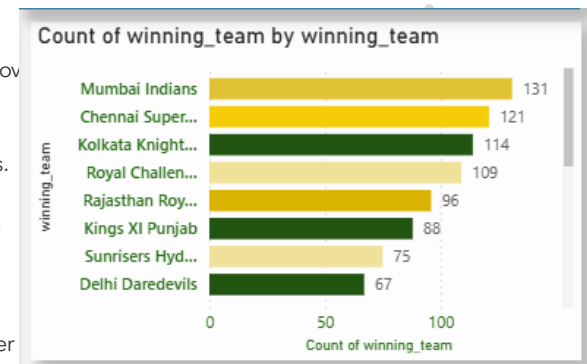- **Runs:** 423 wins (~44.4%)

- **SuperOver:** 14 wins (~1.47%)

- **No Results:** Very few cases

- 🔎 **Detailed Overview**

- Most IPL matches are won by **chasing successfully (wickets in hand)**.

- Slightly fewer matches are won by **defending totals (runs)**.

- Very few matches have gone into **SuperOvers** (high thrill, but rare).

- This shows IPL is largely a **chasing-friendly league** due to smaller grounds, flat pitches, and dew in night matches.

- 👉 **How Teams Won Matches Insight:**

- Chasing remains the safer option in IPL.

- But strong teams like CSK and MI have often defended

- SuperOvers highlight the **thrill & unpredictability** of I

Count of id by won_by

won_by
- Wickets
- Runs
- SuperOver
- NoResults

14 (1.47%)
423 (44....)
509 (53.58%)
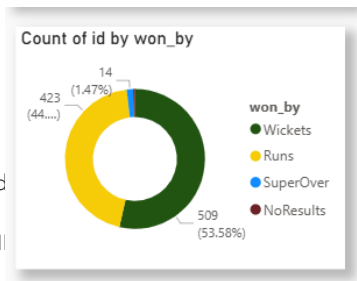
TEAM WINS FOR THE SEASON (HORIZONTAL BAR CHART VISUAL)

- **Mumbai Indians:** 131 wins (highest)

- **Chennai Super Kings:** 121 wins

- **Kolkata Knight Riders:** 114 wins

- **Royal Challengers Bangalore:** 109 wins

- **Rajasthan Royals:** 96 wins

- **Kings XI Punjab (Punjab Kings):** 88 wins

- **Sunrisers Hyderabad:** 75 wins

- **Delhi Daredevils/Capitals:** 67 wins

- 🔎 **Detailed Overview**

- **Mumbai Indians** dominate with the highest number of wins, prov history.

- **CSK** follow closely with consistent performances across seasons.

- **RCB & KKR** have been competitive but not always title winners.

- **RR, SRH, and Punjab Kings** show mixed performances.

- **Delhi** have improved in recent seasons but historically had fewer

Count of winning_team by winning_team

Mumbai Indians — 131
Chennai Super... — 121
Kolkata Knight... — 114
Royal Challen... — 109
Rajasthan Roy... — 96
Kings XI Punjab — 88
Sunrisers Hyd... — 75
Delhi Daredevils — 67

winning_team

0   50   100
Count of winning_team

Conclusion & Key Insights

- **Team Dominance:**

  Mumbai Indians and Chennai Super Kings are the most successful franchises.

  Gujarat Titans' title win shows how **new teams can quickly rise** in IPL.

- **Batting Trends:**

  Virat Kohli's massive run tally reflects **consistency & dominance**.

  IPL batting is boundary-heavy with thousands of 4s & 6s.

- **Bowling Impact:**

  DJ Bravo leads wickets, showing how **T20 specialists thrive** in IPL.

  Economy & variations matter more than raw pace.

- **Toss & Match Outcomes:**

  Batting first has historically given a higher win rate.

  But chasing still dominates in many venues, especially dew-affected matches.

- **Match Result Trends:**

  Majority of wins come from **successful chases (wickets in hand)**.

  Defending scores is tougher but elite teams do it well.

- 👉 **Final Insight:**

  The IPL is not just about power hitting—it's a balance of **venue conditions, toss strategies, consistent batting, and clever bowling**. The most successful teams are those that adapt best to these factors.