**IPL Graph Schema**

**Domain**: IPL Match Analysis (2008-2022)  
**Graph Type**: Property Graph

**1. Core Nodes & Properties**

| **Node** | **Properties** | **Unique ID** |
| --- | --- | --- |
| Match | id, date, match\_number, toss\_decision, won\_by, margin | id |
| Team | name | name |
| Player | name | name |
| Venue | name, city | name |
| Innings | match\_id, number | Composite (match\_id + number) |
| Delivery | match\_id, innings, over, ball\_number, batsman\_run, extras\_run, total\_run | Composite (match\_id + innings + over + ball\_number) |
| Wicket | player\_out, type, fielders\_involved | - |
| Umpire | name | name |

**2. Key Relationships**

(Match)-[:HELD\_AT]->(Venue)

(Match)-[:UMPIRED\_BY]->(Umpire)

(Match)-[:INVOLVES\_TEAM]->(Team)

(Team)-[:WON|LOST]->(Match)

(Team)-[:PLAYED\_AGAINST]->(Team)

(Player)-[:PLAYED\_IN]->(Match)

(Player)-[:MEMBER\_OF]->(Team)

(Player)-[:BATTED\_IN]->(Delivery)

(Player)-[:BOWLED\_IN]->(Delivery)

(Player)-[:WAS\_NON\_STRIKER\_IN]->(Delivery)

(Player)-[:PLAYER\_OF\_MATCH]->(Match)

(Delivery)-[:RESULTED\_IN]->(Wicket)

(Innings)-[:HAS\_DELIVERY]->(Delivery)

**3. Indexing Strategy**

CREATE INDEX FOR (m:Match) ON (m.id);

CREATE INDEX FOR (p:Player) ON (p.name);

CREATE CONSTRAINT FOR (t:Team) REQUIRE t.name IS UNIQUE;

**4. Key Query Patterns**

* **Player Performance**: (Player)-[:BATTED\_IN|BOWLED\_IN]->(Delivery)
* **Venue Impact**: (Venue)<-[:HELD\_AT]-(Match)-[:HAS\_INNING]->(Innings)-[:HAS\_DELIVERY]->(Delivery)
* **Team Matchups**: (Team)-[:PLAYED\_AGAINST]->(Team) WHERE match\_id = $id
* **Wicket Analysis**: (Delivery)-[:RESULTED\_IN]->(Wicket) WHERE type = 'bowled'