**14-763: Systems and Tool Chains for AI Engineers**

**Course Project: Option 1**

**ReadMe File**

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**Feature Description**

* sofifa\_id: Identifier for each player in Sofifa database.
* player\_url: URL link to the player's profile.
* short\_name: Shortened version of the player's name.
* long\_name: Full name of the player.
* player\_positions: Positions at which the player can play.
* overall: Overall rating of the player's skills and abilities.
* potential: The potential overall rating a player can achieve.
* value\_eur: Current market value of the player in Euros.
* wage\_eur: Weekly wage of the player in Euros.
* age: Age of the player.
* dob: Date of birth of the player.
* height\_cm: Height of the player in centimeters.
* weight\_kg: Weight of the player in kilograms.
* club\_team\_id: Unique identifier for the player's club team.
* club\_name: Name of the player's club team.
* league\_name: Name of the league in which the club team participates.
* league\_level: Level of the league (e.g., top-tier, second-tier).
* club\_position: Position at which the player plays in the club team.
* club\_jersey\_number: Jersey number worn by the player in the club team.
* club\_loaned\_from: Club from which the player is loaned (if applicable).
* club\_joined: Date when the player joined the current club team.
* club\_contract\_valid\_until: Expiry date of the player's contract with the club team.
* nationality\_id: Unique identifier for the player's nationality.
* nationality\_name: Nationality of the player.
* nation\_team\_id: Unique identifier for the player's national team.
* nation\_position: Position at which the player plays in the national team.
* nation\_jersey\_number: Jersey number worn by the player in the national team.
* preferred\_foot: Player's preferred foot (left or right).
* weak\_foot: Rating of the player's weaker foot (out of 5).
* skill\_moves: Rating of the player's skill moves (out of 5).
* international\_reputation: Rating of the player's international reputation (out of 5).
* work\_rate: Player's work rate; Offense/Defense (e.g., High/High, Medium/Low).
* body\_type: Physique/body type of the player.
* real\_face: Whether the player has a real face in the game (Yes/No).
* release\_clause\_eur: Release clause value in Euros.
* player\_tags: Tags associated with the player’s play style.
* player\_traits: Strength associated with the player.
* pace, shooting, passing, dribbling, defending, physic: Various skill ratings related to the player's abilities.
* attacking\_crossing, attacking\_finishing, attacking\_heading\_accuracy, attacking\_short\_passing, attacking\_volleys, skill\_dribbling, skill\_curve, skill\_fk\_accuracy, skill\_long\_passing, skill\_ball\_control: More detailed skill ratings related to specific player abilities.
* movement\_acceleration, movement\_sprint\_speed, movement\_agility, movement\_reactions, movement\_balance: Ratings related to player movement abilities.
* power\_shot\_power, power\_jumping, power\_stamina, power\_strength, power\_long\_shots: Ratings related to player power attributes.
* mentality\_aggression, mentality\_interceptions, mentality\_positioning, mentality\_vision, mentality\_penalties, mentality\_composure: Ratings related to player mentality attributes.
* defending\_marking\_awareness, defending\_standing\_tackle, defending\_sliding\_tackle: Ratings related to player defending abilities.
* goalkeeping\_diving, goalkeeping\_handling, goalkeeping\_kicking, goalkeeping\_positioning, goalkeeping\_reflexes, goalkeeping\_speed: Ratings related to player goalkeeping abilities (for goalkeepers only).
* ls, st, rs, lw, lf, cf, rf, rw, lam, cam, ram, lm, lcm, cm, rcm, rm, lwb, ldm, cdm, rdm, rwb, lb, lcb, cb, rcb, rb, gk: Player positions with specific ratings for each position (for outfield players and goalkeepers).
* player\_face\_url: URL link to the player's face image.
* club\_logo\_url: URL link to the club's logo image.
* club\_flag\_url: URL link to the club's flag image.
* nation\_logo\_url: URL link to the national team's logo image.
* nation\_flag\_url: URL link to the national team's flag image.
* year: Mentions the year of the ratings of the player
* unique\_id: Unique id for each entry in the dataset

**Identification of Constraints:**

* real\_face: Boolean value, assuming it's a Yes/No or True/False indication.
  + BOOLEAN

| Feature Name | Constraint | Constraints in SQL |
| --- | --- | --- |
| sofifa\_id | number | NOT NULL, NUMERIC |
| player\_url | character | NOT NULL, UNIQUE, VARCHAR(255) |
| short\_name | Character | NOT NULL, VARCHAR(255) |
| long\_name | Character | NOT NULL, VARCHAR(255) |
| player\_positions | Character | NOT NULL, VARCHAR(255) |
| overall | number, >0 and <100, | NOT NULL, NUMERIC |
| potential | number, >0 and <100, | NOT NULL, NUMERIC |
| value\_eur | number | NUMERIC |
| wage\_eur | number | NUMERIC |
| age | number | NOT NULL, NUMERIC |
| dob | date | DATE |
| height\_cm | number | NOT NULL, NUMERIC |
| weight\_kg | number | NOT NULL, NUMERIC |
| club\_team\_id | number | NOT NULL, NUMERIC |
| club\_name | character | VARCHAR(255) |
| league\_name | character | VARCHAR(255) |
| league\_level | number | NUMERIC |
| club\_position | character | VARCHAR(5) |
| club\_jersey\_number | number | NUMERIC |
| club\_loaned\_from | character | VARCHAR(255) |
| club\_joined | date | DATE |
| club\_contract\_valid\_until | number | NUMERIC |
| nationality\_id | number | NUMERIC |
| nationality\_name | character | VARCAHR(255) |
| nation\_team\_id | number | NUMERIC |
| nation\_position | character | VARCHAR(5) |
| nation\_jersey\_number | number | NUMERIC |
| preferred\_foot | character | VARCHAR(5) |
| weak\_foot | Number, >0 <=5 | NUMERIC |
| skill\_moves | Number, >0 <=5 | NUMERIC |
| international\_reputation | Number, >0 <=5 | NUMERIC |
| work\_rate | character | VARCHAR(15) |
| body\_type | character | VARCHAR(15) |
| real\_face | character | VARCHAR(3) |
| release\_clause\_eur | number | NUMERIC |
| player\_tags | character | VARCHAR(255) |
| player\_traits | character | VARCHAR(255) |
| pace, shooting, passing, dribbling, physic, attacking\_crossing, attacking\_finishing, attacking\_heading\_accuracy, attacking\_short\_passing, attacking\_volleys, skill\_dribbling, skill\_curve, skill\_fk\_accuracy, skill\_long\_passing, skill\_ball\_control, movement\_acceleration, movement\_sprint\_speed, movement\_agility, movement\_reactions, movement\_balance, power\_shot\_power, power\_jumping, power\_stamina, power\_strength, power\_long\_shots, mentality\_aggression, mentality\_interceptions, mentality\_positioning, mentality\_vision, mentality\_penalties,mentality\_composure, defending\_marking\_awareness, defending\_standing\_tackle, defending\_sliding\_tackle, goalkeeping\_diving, goalkeeping\_handling, goalkeeping\_kicking, goalkeeping\_positioning, goalkeeping\_reflexes, goalkeeping\_speed | Number, >0 and <100 | NUMERIC |
| Ls, st, rs, lw, lf, cf, rf, rw, lam, cam, ram, lm, lcm, cm, rcm, rm, lwb, ldm, cdm, rdm, rwb, lb, lcb, cb, rcb, rb, gk | character(because there is a plus sign) | NOT NULL, VARCHAR(5) |
| player\_face\_url | character | NOT NULL, UNIQUE, VARCHAR(255) |
| club\_logo\_url | character | NOT NULL, VARCHAR(255) |
| club\_flag\_url | character | NOT NULL, VARCHAR(255) |
| nation\_logo\_url | character | NOT NULL, VARCHAR(255) |
| nation\_flag\_url | character | NOT NULL, VARCHAR(255) |
| year | number | NOT NULL, NUMERIC |
| unique\_id | PRIMARY\_KEY | NOT NULL, UNIQUE, PRIMARY KEY |