Dream 11(Inter IIT software development PS)

- **Objective:** Develop a robust ML model that can suggest the best players for Dream11 based on numerous match-relevant factors.

- **Key Aspects:**
- Use of historical data, match conditions, and other game-specific variables.
- Real-time insights and intuitive UI for team formation.
- Continuous updates with incoming match information.

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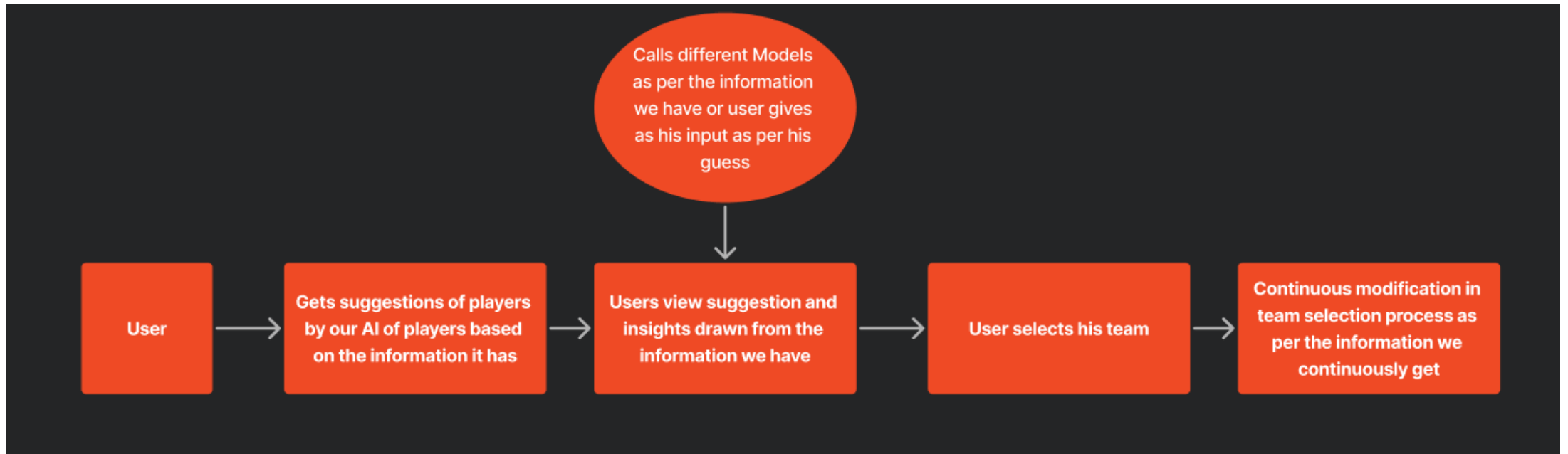
Next Gen Team Builder with Predictive AI

Machine Learning Model Overview

Factors Considered:

- **Pitch Factors:** Type of soil, cracks, boundary proximity.

- **Environmental Influences:** Dew point, temperature, etc.

- **Player Dynamics:** Performance in critical matches, pressure handling under different matches(like for playoffs performance,.

- **Innings Analysis:** Bowling/batting conditions per innings.

- **Toss Effect:** How toss outcome affects player choice.

- **Playing 11** either sides and checking possibility of two players to be likely to combat(few batsman face difficulty against few bowlers vice versa)
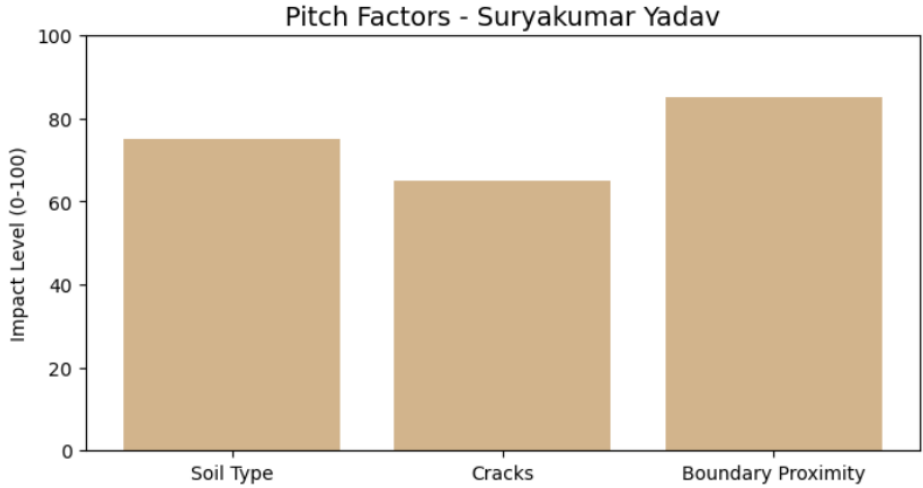

- Including Sub ML models which predict the possible combats which analyses when and which player may face pressure situations

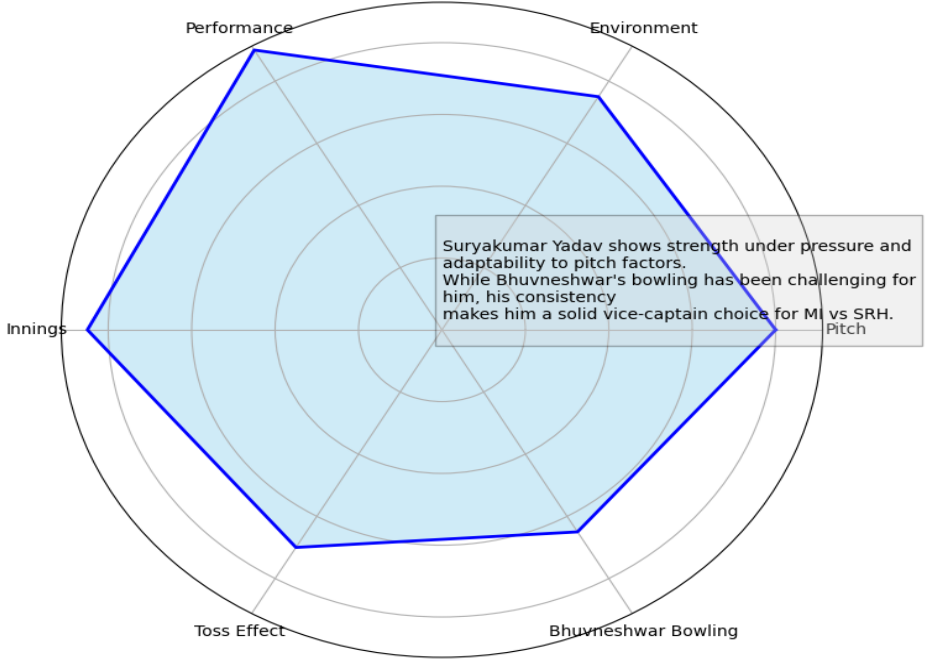- Other important factors will be included in model(when the work begins)

Calls different Models as per the information we have or user gives as his input as per his guess

| User | → | Gets suggestions of players by our AI of players based on the information it has | → | Users view suggestion and insights drawn from the information we have | → | User selects his team | → | Continuous modification in team selection process as per the information we continuously get |

Example

Suryakumar Yadav - Statistical Analysis (MI vs SRH)

Suryakumar Yadav shows strength under pressure and adaptability to pitch factors.
While Bhuvneshwar's bowling has been challenging for him, his consistency
makes him a solid vice-captain choice for MI vs SRH.

Pitch Factors - Suryakumar Yadav

Suryakumar handles varying soil types well but faces challenges with pitch cracks. Boundary proximity boosts his shot choices, making him more effective on shorter boundaries.
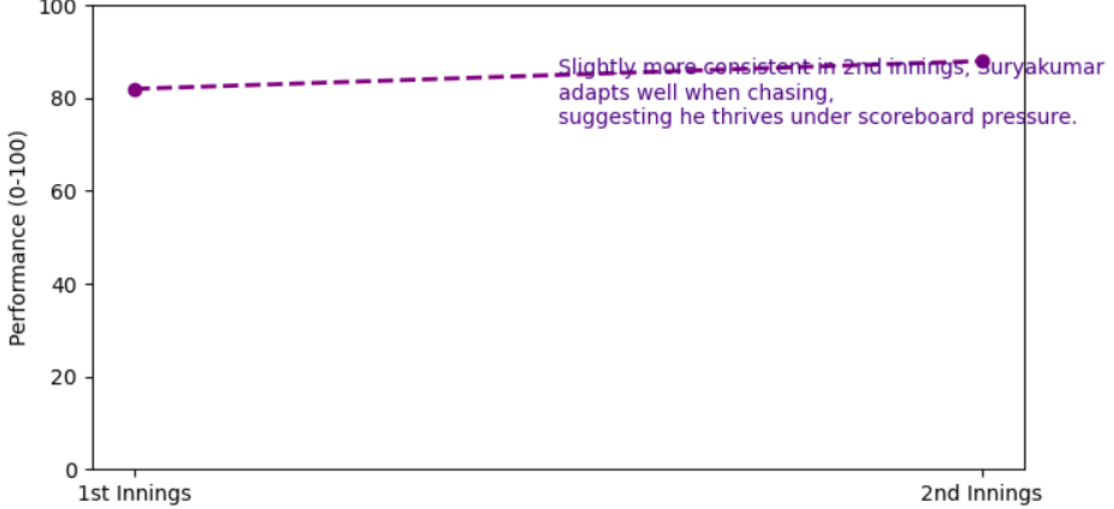
Suryakumar Yadav excels under pressure and in chasing, making him a strong vice-captain candidate. He performs better in the 2nd innings but may struggle against Bhuvneshwar Kumar. Overall, his form and adaptability make him a key inclusion in the team.

Innings Analysis - Suryakumar Yadav

Slightly more consistent in 2nd innings, Suryakumar adapts well when chasing, suggesting he thrives under scoreboard pressure.

Technicality

Techstacks appropriate for this :

- **Frontend**:React.js: For building dynamic, single-page applications.Bootstrap CSS: For responsive and modern UI design.

- **Backend**:Flask,ML/DL.

- **Database**:SQLAlchemy (ORM) with MySQL.Online Database: cloud databases like Heroku Postgres or AWS RDS before deployment.

- **Additional Tools :**Real-time Data Processing: Use **WebSockets** or **Socket.IO** to deliver live player stats, match events, and predictions.

- **Deployment**:Heroku or Docker.

- Other necessary APIs for Prediction