

Synopsis: Predicting Cricket Match Outcomes and Toss Decisions

The project aims to predict outcomes of T20 cricket matches by analysing historical ball-by-ball data and player/team performances. Key objectives include:

1. **Toss Decision Prediction:** Suggesting whether to bat or field after winning the toss, based on the pitch, weather, and historical trends.
2. **Match Victory Prediction:** Estimating winning probabilities for both first and second innings, using metrics like runs, wickets, player contributions, and team dynamics.

Methodology

- **Data Analysis & Preprocessing:** Leveraging 4 lakh historical ball-by-ball records to extract meaningful features.
- **Feature Engineering:** Creating specialized metrics for innings-specific predictions.
- **Machine Learning Models:** Developing separate predictive models for toss decisions and innings-based outcomes.
- **Dynamic Predictions:** Updating probabilities in real-time during matches.