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## DATA-DRIVEN PLAYER PERFORMANCE PREDICTION FOR ODI CRICKET TEAM SELECTION USING SUPERVISED MACHINE LEARNING

Cricket, a globally celebrated sport, depends significantly on individual player performances to shape One Day International (ODI) match outcomes. Traditional team selection methods, often reliant on intuition and historical records, lack objectivity. This study applies supervised machine learning to predict batsman and bowler performances in ODIs, facilitating data-driven team selection. Historical match data, player statistics, venue-specific trends, and opposition records are analyzed to develop two classification models: one for forecasting batsman run ranges and another for predicting bowler wicket ranges. Model performance is assessed through accuracy, precision, recall, and Area Under the Curve (AUC). Key performance indicators, such as batting consistency and bowling economy, are identified as critical predictors, providing actionable insights for team management. The proposed framework minimizes selection biases, optimizes team composition, and enhances decision-making, offering a robust methodology for professional cricket team selection.

**Keywords:** Player Performance Prediction, Machine Learning, Supervised Learning, Predictive Modelling, Sports Analytics.

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