

Predictive analytics for identifying most valuable players in the 2024 T20 cricket world cup: A comparative study of support vector regression Kernels

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Published online: October 31, 2024

Accepted for publication: October 15, 2024

DOI:10.7752/jpes.2024.10256

Abstract

Background: This study investigates the use of machine learning models, specifically support vector regression (SVR) kernels, to predict team performance and identify potential most valuable players (MVPs) in the 2024 International Cricket Council (ICC) Men's T20 World Cup. **Purpose:** The primary objective is to evaluate and compare the predictive accuracy of three SVR kernels—radial basis function (RBF), linear, and polynomial (poly)—to identify which model demonstrates superior predictive capabilities in the context of T20 cricket. **Materials and Methods:** Comprehensive data on the current 15-member squads of each participating team were collected from the official ICC website, including detailed player statistics and team performance metrics. Rigorous data preprocessing, such as deduplication and outlier detection, was performed to ensure dataset accuracy. The data were then split into training and testing sets to assess the performance of the SVR models. The three kernels—RBF, linear, and poly—were evaluated using performance metrics such as mean squared error (MSE), root mean squared error (RMSE), mean absolute error (MAE), and R-squared (R^2). **Results:** The RBF kernel proved to be the most accurate predictor, achieving the lowest MSE (16.43), RMSE (4.05), and MAE (2.91), along with the highest R^2 (0.856). In contrast, the linear and poly kernels recorded higher error metrics and lower R^2 values, indicating reduced accuracy. Predictions for potential MVPs identified Glenn Maxwell (Australia) and Andre Russell (West Indies) as standout performers, with ratings of 81.5% and 81.4%, respectively. This study highlights the superior predictive performance of the RBF kernel in the dynamic setting of T20 cricket. **Conclusions:** The integration of predictive analytics with pedagogical principles in coaching can optimize player development and enhance team performance. These findings offer actionable insights for team management and strategic planning in the competitive landscape of the ICC Men's T20 World Cup. **Keywords:** support vector regression, t20 cricket, world cup, player performance prediction, most valuable player

Introduction

The growing demand for continuous improvement in sports has driven the need for rigorous analysis of various methodologies to achieve advancements across different athletic disciplines (Georgievski and Vrtagic, 2021; Sukumaran et al., 2022; Bozděch and Vychodilová, 2023; Putra et al., 2023; Hsu et al., 2023; Nagorna et al., 2024; Sampaio et al., 2024).

Cricket, a sport with a rich history and a rapidly expanding global fan base, has seen considerable transformation in recent years owing to the integration of data analytics (Anuraj et al., 2023) and machine learning into its strategies (Subburaj et al., 2023; Siddiqui et al., 2023; Gomes et al., 2023). The International Cricket Council (ICC) World Cup T20, a premier cricket tournament featuring national teams competing in the shortest format of the game, is known for its thrilling matches and worldwide cricketing passion (Kapadia et al., 2022; ESPNcricinfo, 2024).

This study examines the use of machine learning models to predict team performance and winning probabilities in the ICC Men's T20 World Cup, presenting a novel approach to understanding the complexities of the game (Sumathi et al., 2023). The T20 World Cup, known for its intense competition and unpredictable outcomes, poses a unique challenge for cricket enthusiasts and analysts (International Cricket Council official website, 2024). Traditional methods for predicting match results often fall short owing to the numerous variables affecting the game, including player form, team dynamics, and external factors such as weather conditions (Aburas et al., 2018; Bai and Bai, 2021). This challenge has prompted the exploration of technologies, particularly machine learning, to harness the power of data to make more accurate predictions.

This research aims to conduct a comprehensive comparative analysis of various machine learning models for predicting team performance and winning probabilities in the ICC T20 World Cup 2024. The study will focus on leveraging historical match data, player statistics, team dynamics, and other relevant features to train and assess the effectiveness of different machine learning algorithms (Kapadia et al., 2022; Passi and Pandey, 2018a; Passi and Pandey, 2018b).

The primary objective is to identify which machine learning models demonstrate superior predictive capabilities in the dynamic setting of T20 cricket, particularly in the high-stakes environment of the World Cup. By analyzing and comparing the performance of these models, the study seeks to highlight their strengths, weaknesses, and potential areas for enhancement (Van Eetvelde et al., 2021; Georgievski and Vrtagic, 2021; Gomes et al., 2023). Pedagogy plays a vital role in developing players' skills, tactics, and overall performance. This study investigates the intersection of pedagogical principles and theories with predictive analytics in cricket coaching strategies. It integrates learning styles, feedback mechanisms, goal-setting techniques, and player motivation within the framework of sports pedagogy to deepen our understanding of how machine learning can enhance coaching methodologies in cricket.

The selection of features for training the machine learning models is critical, with factors such as player statistics, team composition, match venue, and recent performance trends being taken into account (Baboota and Kaur, 2019; Men, 2022). The findings of this research are important not only for cricket enthusiasts looking to improve their match predictions but also for team management and other stakeholders in the cricketing ecosystem. Accurate predictions can provide teams with strategic advantages, supporting match strategy formulation, team selection, and tactical decisions (Bunker and Thabtah, 2019; Wickramasinghe, 2014). Thus, this research study serves a dual purpose. First, it evaluates and compares the predictive accuracy of three SVR kernels—RBF, linear, and polynomial (poly)—in the context of the T20 Men's World Cup Cricket Tournament 2024. Second, it aims to use these models to predict the performance probabilities of the MVP for each team in the tournament.

Materials and Methods

Participants

Data collection was performed with meticulous attention to detail, focusing on the 15-member squads of the top 10 teams (Afghanistan, Australia, Bangladesh, England, India, New Zealand, Pakistan, South Africa, Sri Lanka, and West Indies) participating in the men's World Cup cricket. This process was completed before the league's commencement and included information up to May 18, 2024. The data sources selected for this study were exclusively drawn from the official website of the ICC: <https://www.icc-cricket.com>.

Research design

The primary focus of this study is on predictive analytics to identify the most valuable player (MVP) for each team participating in the ICC Men's T20 World Cup 2024. The main objectives were to evaluate and compare the predictive accuracy of three support vector regression (SVR) kernels: radial basis function (RBF), linear, and poly. Data collection involved the meticulous compilation of extensive T20 cricket statistics for the current 25 members of each team. A comprehensive analysis of performance metrics was performed, with the ICC website chosen as the official source for its credibility. To ensure data accuracy and reliability, a rigorous cleaning process was implemented, including deduplication and outlier detection in key metrics (Hudnurkar and Rayavarapu, 2022; Šuštaršič et al., 2022).

Data preprocessing was a crucial step in ensuring the accuracy of the dataset, involving deduplication and the identification and removal of outliers. The data were systematically divided into training and testing sets to facilitate an evaluation of the model's performance (Sivaramaraju Vetukuri et al., 2019). Three kernel models based on the SVR machine learning technique were used in this study. Various performance metrics were used to thoroughly assess the efficacy of these models. This comprehensive approach guarantees a robust and unbiased evaluation of the predictive capabilities of the selected SVR kernels in the complex context of predicting the MVP of the Tournament for the 2024 season (International Cricket Council, 2024; Wickramasinghe, 2020). The architectural process methodology is depicted in Figure 1.

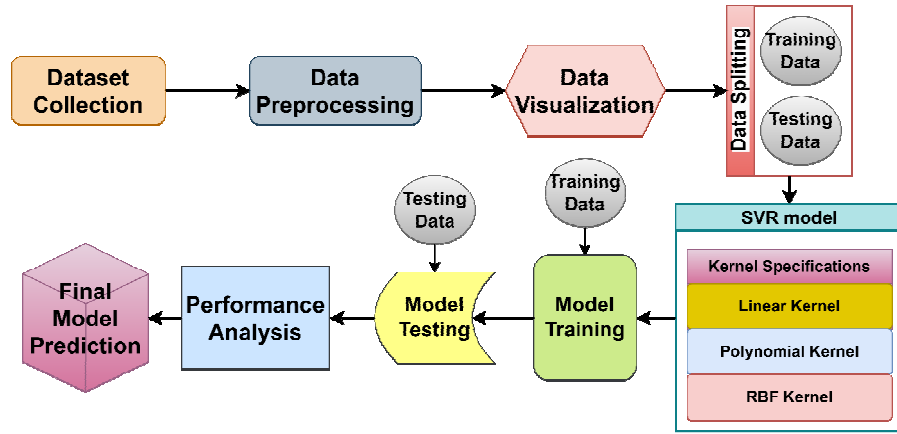


Figure 1. The architectural process methodology for predicting the most valuable player in the Men's World Cup Cricket Tournament 2024

Statistical analysis

The assessment of the RBF, linear, and poly kernels on various performance metrics:

1. Mean Squared Error (MSE) = $\left(\frac{1}{n}\right) \times \sum (y_{\text{predict}} - y_{\text{actual}})^2$
2. Root Mean Squared Error (RMSE) = $\sqrt{\left(\frac{1}{n}\right) \times \sum (y_{\text{predict}} - y_{\text{actual}})^2}$
3. Mean Absolute Error (MAE) = $\frac{1}{n} \times \sum (y_{\text{predict}} - y_{\text{actual}})$
4. R-squared (R^2) = $1 - \left[\frac{\sum (y_{\text{actual}} - y_{\text{predict}})^2}{\sum (y_{\text{actual}} - y_{\text{mean}})^2} \right]$

Here, y_{predict} is the predicted performance, y_{actual} is the observed actual performance, n is the number of data points, and y_{mean} is the mean of the observed actual performance values (Sanjaykumar et al., 2023; Gu et al., 2023; Lakshmi et al., 2024).

Results

The results of this analysis highlight the performance of three kernel models in SVR for predicting the MVP of the Tournament in the 2024 Men's T20 World Cup cricket season. The study systematically evaluates the accuracy of three specific kernel models—RBF, linear, and poly—and reveals variations in their predictive performance levels.

Table 1. A comparative assessment of support vector regression (SVR) kernel models: RBF, linear, and polynomial (poly)

SVR kernels	MSE	RMSE	MAE	R^2
RBF kernel	16.43	4.05	2.91	0.856
Linear kernel	56.47	7.51	5.68	0.505
Poly kernel	50.79	7.13	4.91	0.555

SVR = support vector regression, MSE = mean squared error, RMSE = root mean squared error, MAE = mean absolute error, R^2 = R squared

Radial basis function (RBF) kernel model

Table 1 outlines the performance metrics of SVR using the RBF kernel. The SVR model demonstrates considerable effectiveness, indicated by a mean squared error (MSE) of 16.43, which highlights minimal average squared differences between predicted and actual values. Additionally, a root mean squared error (RMSE) of 4.05 signifies a relatively accurate average distance between predictions and actual outcomes.

The mean absolute error (MAE) of 2.91 further highlights the model's accuracy, reflecting a smaller average absolute deviation from the actual values. Furthermore, the R-squared (R^2) value of 0.856 indicates the strong capability of the SVR model with the RBF kernel to explain the variance in the dependent variable based on the selected features, reinforcing its reliability and accuracy in capturing the underlying patterns in the data. The performance prediction graph for the RBF kernel model is presented in Figure 2.

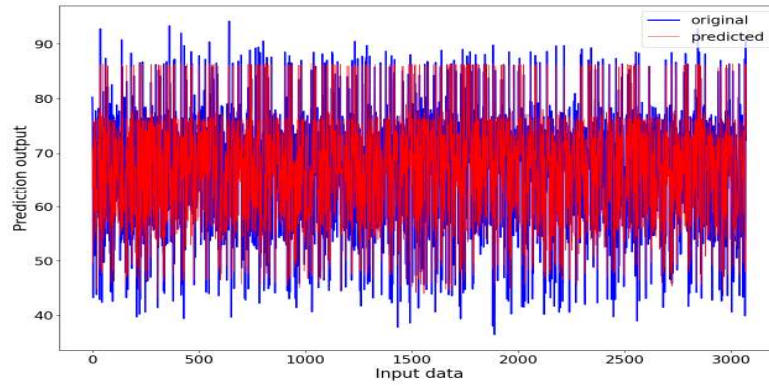


Figure 2. The performance prediction graph for the RBF kernel model showing that the predicted values (in red) closely align with the actual values (in blue), exhibiting only slight variations

Linear kernel model

Table 1 presents the performance metrics of SVR using the linear kernel. The SVR model with the linear kernel shows an MSE of 56.47, reflecting the average squared difference between predicted and actual values. The RMSE of 7.51 indicates a reasonably accurate average distance between the predictions and actual outcomes. Additionally, the MAE is reported as 5.68, representing the average absolute difference between the predicted and actual values. The R^2 value of 0.505 indicates the model's ability to explain the variance in the dependent variable based on the selected features. Although these error metrics are relatively higher compared to those of the RBF kernel, they provide valuable insights into the predictive performance of the SVR model using the linear kernel. The prediction graph for the linear kernel model is presented in Figure 3.

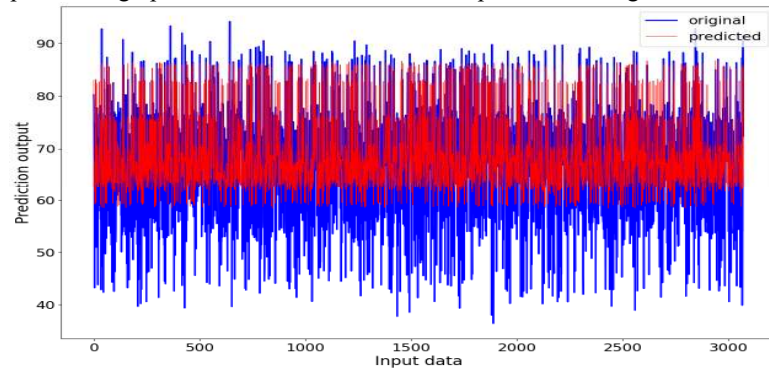


Figure 3. Prediction graph for the linear kernel model, where predicted values in red closely align with actual values in blue, showing only slight variations

Polynomial (Poly) kernel model

Table 1 presents the performance metrics of SVR using the poly kernel. The SVR model with the poly kernel demonstrates an MSE of 50.79, reflecting the average squared difference between predicted and actual values. The RMSE of 7.13 indicates a reasonably accurate average distance between predictions and actual values. Additionally, the MAE is reported as 4.91, representing the average absolute difference between predicted and actual values. The R^2 value of 0.555 highlights the model's capacity to explain the variance in the dependent variable based on the selected features. The poly kernel model prediction graph is presented in Figure 4.

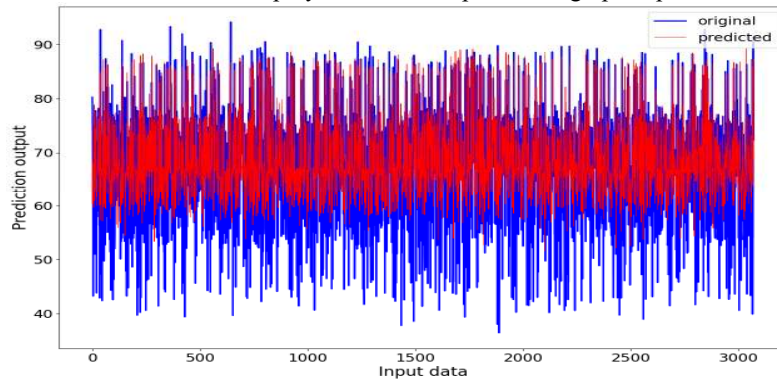


Figure 4. Prediction graph for the poly kernel model demonstrating a close alignment between predicted values (in red) and actual values (in blue), with only slight variations

Comparative assessment of support vector regression (SVR) kernel models

Table 1 presents a comprehensive comparative assessment of SVR kernel models: RBF, linear, and poly kernels. The RBF kernel exhibits superior performance, achieving the lowest MSE of 16.43, an RMSE of 4.05, an MAE of 2.91, and the highest R^2 value of 0.856, reflecting its exceptional accuracy in capturing underlying patterns. In contrast, the Linear and Poly Kernels demonstrate higher error metrics and comparatively lower R^2 values, indicating reduced accuracy. This comparative analysis emphasizes the critical importance of kernel selection in optimizing SVR models, showcasing the superiority of the RBF kernel in achieving superior predictive outcomes. The performance of the three algorithms reveals notable differences: the RBF kernel achieves an accuracy of 85.6%, while the linear and poly kernels attain accuracies of 50.5% and 55.5%, respectively. The prediction analysis based on these three kernels is illustrated in Figure 5.

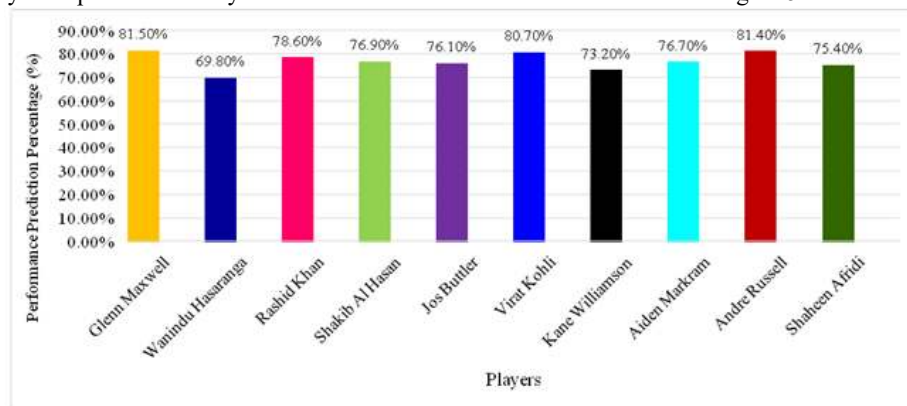


Figure 5. Predicted probabilities of the most valuable player (MV) from each team, analyzed using three support vector regression (SVR) kernels

Discussion

This study evaluates the complexities of predictive analytics, focusing on the effectiveness of three SVR kernels—RBF, linear, and poly—in predicting the MVP for each team in the Men's T20 World Cup 2024 season. The initial hypothesis suggests that these SVR models can identify and predict player performance probabilities, a proposition supported by the subsequent findings (Kaur et al., 2021a). The RBF kernel, known for its ability to manage non-linear relationships, is the most accurate predictor among the three, exhibiting the highest R^2 value of 0.856 alongside the lowest MSE, RMSE, and MAE. These metrics collectively highlight the model's effectiveness in minimizing squared differences, accurately measuring average distances between predicted and actual values, and achieving a smaller average absolute deviation. In contrast, the linear and poly kernels, although capable, exhibit higher error metrics and comparatively lower R-squared values, indicating a relatively reduced accuracy in capturing performance patterns (Sumathi et al., 2023; Abebe et al., 2020).

Beyond comparing kernels, this study uses its predictive capabilities to identify potential MVPs across different teams. Notably, Glenn Maxwell and Andre Russell are top contenders with impressive ratings of 81.5% and 81.4%, respectively, indicating their likely pivotal roles for their teams. Additionally, players such as Virat Kohli, who has a rating of 80.7%, further underscore the depth of talent identified in this analysis. These predictions provide valuable insights into likely standout performers, serving as a strategic resource for team management decisions in the upcoming Men's T20 World Cup cricket season, as inferred from the predictive modeling (Saikia, 2020; Kaur et al., 2021b). The study highlights the critical importance of SVR kernels in predictive analytics, particularly emphasizing the superiority of the RBF kernel. Through a detailed analysis of performance metrics and individual MVP predictions, the research provides actionable insights for team strategies, presenting a data-driven approach to decision-making in the dynamic and competitive landscape of T20 cricket (Subburaj et al., 2023; Simsek et al., 2021).

Pedagogical principles—including coaching strategies, learning styles, feedback mechanisms, goal-setting techniques, and player motivation—are essential in shaping coaching practices and enhancing player development. By integrating predictive analytics into coaching strategies, coaches can customize training programs to target specific areas for improvement identified through historical performance data analysis. Moreover, understanding players' unique learning styles allows coaches to adjust their coaching methods for maximum effectiveness. Real-time feedback from predictive models allows for immediate adjustments and ongoing improvement. Additionally, establishing realistic and personalized goals based on performance data promotes motivation and engagement, ultimately driving player development and contributing to team success. By integrating predictive analytics with pedagogical principles, coaches can foster a supportive and empowering environment that optimizes player performance and enhances overall team success in the dynamic and competitive landscape of T20 cricket, as demonstrated by the findings of this study (Sanjaykumar et al., 2024; Passi and Pandey, 2018c).

Conclusions

This study highlights the efficacy of SVR kernels, especially the RBF, in predicting player performance and identifying potential MVPs for each team in the Men's T20 World Cup cricket season. The RBF kernel exhibited superior accuracy in capturing performance patterns and demonstrated a greater ability to minimize prediction errors compared to linear and poly kernels. Additionally, the study predicts the MVP for each team using various predictive models, with Glenn Maxwell (Australia) leading at 81.5%. This result suggests a strong likelihood that Glenn Maxwell will be a key contributor and potential MVP in the Men's World Cup cricket season. Identifying potential MVPs provides crucial insights for team management, aiding in strategic planning for the upcoming World Cup season. Furthermore, the study highlights the significance of integrating predictive analytics with pedagogical principles in coaching practices. By customizing training programs, adapting coaching methods, delivering real-time feedback, and establishing personalized goals based on performance data, coaches can optimize player development and improve team performance in the dynamic and competitive environment of T20 cricket. This holistic approach aligns with the goal of fostering a supportive and empowering environment for players, ultimately contributing to the success of teams participating in the T20 World Cup.

Acknowledgments

We extend our gratitude to the International Cricket Council (ICC), the Board of Control for Cricket in India (BCCI), ESPN Cricinfo and Falcon Scientific Editing.

Conflict of Interest We confirm that there are no conflicts of interest.

References

- Abebe, M., Shin, Y., Noh, Y., Lee, S., & Lee, I. (2020). Machine learning approaches for ship speed prediction towards energy efficient shipping. *Applied Sciences (Switzerland)*, 10(7), 2325. DOI: 10.3390/app10072325
- Aburas, A., Mehtab, M., & Mehtab, Y. (2018). ICC world cup prediction based on data analytics and business intelligent (BI) techniques. In *Proceedings - International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, CyberC 2018* (pp. 273-279). DOI: 10.1109/CyberC.2018.00056
- Anuraj, A., Boparai, G. S., Leung, C. K., Madill, E. W., Pandhi, D. A., Patel, A. D., & Vyas, R. K. (2023). Sports data mining for cricket match prediction. In: *International Conference on Advanced Information Networking and Applications*, pp. 668-680. Cham: Springer International Publishing.
- Baboota, R., & Kaur, H. (2019). Predictive analysis and modeling football results using a machine learning approach for the English Premier League. *International Journal of Forecasting*, 35(2), 741-755. DOI: 10.1016/j.ijforecast.2018.01.003
- Bai, Z., & Bai, X. (2021). Sports big data: Management, analysis, applications, and challenges. *Complexity*. DOI: 10.1155/2021/6676297
- Bozděch, M., & Vychodilová, R. (2023). Evaluation of neural network feature and function settings on the model performance and accuracy. *Journal of Physical Education and Sport*, 23(4), 983-989. <https://doi.org/10.7752/jpes.2023.04123>
- Bunker, R. P., & Thabtah, F. (2019). A machine learning framework for sport result prediction. *Applied Computing and Informatics*, 15(1), 27-33. DOI: 10.1016/j.aci.2017.09.005
- ESPNCricinfo. (2024, May 15). Retrieved from <https://www.espncricinfo.com/>
- Georgievski, B., & Vrtagic, S. (2021). Machine learning and the NBA Game. *Journal of Physical Education and Sport*, 21(6), 3339-3343. <https://doi.org/10.7752/jpes.2021.06453>
- Gomes, M. K. M., Verli, M. V. de A., Macedo, L. dos S., Galvão, A. S., Freitas, N. C. S., & Lohn, R. (2023). Multivariate analysis by exploratory machine learning model indicates orienteering race as an immunometabolically safe stimulus, but with differences between age groups. *Journal of Physical Education and Sport*, 23(2), 372-378. <https://doi.org/10.7752/jpes.2023.02044>
- Gu, B., Cao, J., Pan, F., & Xiong, W. (2023). Incremental learning for Lagrangian ϵ -twin support vector regression. *Soft Computing*, 27(9), 5357-5375. DOI: 10.1007/s00500-022-07755-9
- Hsu, C., Huang, B., Wang, M., & Yun-Jie, F. (2023). Exploring competitive sports technology development: using a MCDM model. *Journal of Physical Education and Sport*, 23(8), 2144-2155. <https://doi.org/10.7752/jpes.2023.08246>
- Hudnurkar, S., & Rayavarapu, N. (2022). Binary classification of rainfall time-series using machine learning algorithms. *International Journal of Electrical and Computer Engineering*, 12(2), 1945-1954. DOI: 10.11591/ijece.v12i2.pp1945-1954
- International Cricket Council. (2024, May 12). All squads named so far: ICC Men's T20 World Cup 2024. Retrieved May 18, 2024, from <https://www.icc-cricket.com/news/all-squads-named-so-far-icc-men-s-t20-world-cup-2024>

- Kapadia, K., Abdel-Jaber, H., Thabtah, F., & Hadi, W. (2022). Sport analytics for cricket game results using machine learning: An experimental study. *Applied Computing and Informatics*, 18(3-4), 256-266. DOI: 10.1016/j.aci.2019.11.006
- Kaur, A., Kaur, R., & Jagdev, G. (2021). Analyzing and exploring the impact of big data analytics in the sports sector. *SN Computer Science*, 2(3), 184. DOI: 10.1007/s42979-021-00575-y
- Lakshmi, P. Y., Sanjaykumar, S., Dharuman, M., & Elangovan, A. (2024). Using Support Vector Regression Kernel Models for Cricket Performance Prediction in the Womens Premier League 2024. *Physical Education Theory and Methodology*, 24(1), 72–78. <https://doi.org/10.17309/tmfv.2024.1.09>
- Men, Y. (2022). Intelligent sports prediction analysis system based on improved Gaussian fuzzy algorithm. *Alexandria Engineering Journal*, 61(7), 5351-5359. DOI: 10.1016/j.aej.2021.08.084
- Nagorna, V., Mytko, A., Borysova, O., Potop, V., Petrenko, H., Zhyhailova, L., I. Folvarochnyi & Lorenzetti, S. (2024). Innovative technologies in sports games: A comprehensive investigation of theory and practice. *Journal of Physical Education & Sport*, 24(3). <https://doi.org/10.7752/jpes.2024.03070>
- Passi, K., & Pandey, N. (2018). Increased prediction accuracy in the game of cricket using machine learning. *International Journal of Data Mining & Knowledge Management Process*, 8, 19-36. DOI: 10.5121/ijdkp.2018.8203
- Putra, A. N., Zarya, F., Bahtra, R., & Sepriadi. (2023). The Development of a differentiation-based learning model in football school students. *Journal of Physical Education and Sport*, 23(12), 3282-3291. <https://doi.org/10.7752/jpes.2023.12375>
- Passi, K., & Pandey, N. (2018). Predicting the outcome of matches using pressure index: Evidence from Twenty20 cricket. *Communications in Statistics: Simulation and Computation*, 49(11), 3028-3040. DOI: 10.1080/03610918.2018.1532003
- Saikia, H. (2020). Quantifying the current form of cricket teams and predicting the match winner. *Management and Labour Studies*, 45(2), 151-158. DOI: 10.1177/0258042X20912603
- Sampaio, T., Oliveira, J. P., Marinho, D. A., Neiva, H. P., & Morais, J. E. (2024). Applications of Machine Learning to Optimize Tennis Performance: A Systematic Review. *Applied Sciences*, 14(13), 5517. <https://doi.org/10.3390/app14135517>
- Sanjaykumar, S., Udaichi, K., Rajendiran, G., Cretu, M., & Kozina, Z. (2023). Cricket performance predictions: A comparative analysis of machine learning models for predicting cricket player's performance in the One Day International (ODI) World Cup 2023: 2024, V.10, No. 1. *Health, Sport, Rehabilitation*. Retrieved from <https://hsr-journal.com/index.php/journal/article/view/920>
- Sanjaykumar, S., Natarajan, S., Lakshmi, P. Y., & Bobby, F. A. (2024). Predicting Team Success in the Indian Premier League Cricket 2024 Season Using Random Forest Analysis. *Physical Education Theory and Methodology*, 24(2), 304–309. <https://doi.org/10.17309/tmfv.2024.2.16>
- Siddiqui, H. U. R., Younas, F., Rustam, F., Flores, E. S., Ballester, J. B., Diez, I. T., Dudley, S., & Ashraf, I. (2023). Enhancing Cricket Performance Analysis with Human Pose Estimation and Machine Learning. *Sensors (Basel, Switzerland)*, 23(15), 6839. <https://doi.org/10.3390/s23156839>
- Simsek, S., Albizri, A., Johnson, M., Custis, T., & Weikert, S. (2021). Predictive data analytics for contract renewals: A decision support tool for managerial decision-making. *Journal of Enterprise Information Management*, 34(2), 718-732. DOI: 10.1108/JEIM-12-2019-0375
- Sivaramaraju Vetukuri, V., Rajender, R., & Sethi, N. (2019). A multi-aspect analysis and prediction scheme for cricket matches in standard T-20 format. *International Journal of Knowledge-Based and Intelligent Engineering Systems*, 23(3), 149-154. DOI: 10.3233/KES-190407
- Subburaj, M., Rao, G. R. K., Parashar, B., Jeyabalan, I., Semban, H., & Sengan, S. (2023). Artificial intelligence for smart in match winning prediction in Twenty20 cricket league using machine learning model. In *EAI/Springer Innovations in Communication and Computing* (pp. 31-46). DOI: 10.1007/978-3-031-236
- Sukumaran, C., Selvam, D., Sankar, M., Parthiban, V., & Sugumar, C. (2022). Application of Artificial Intelligence and Machine Learning to Predict Basketball Match Outcomes: A Systematic Review. *Computer Integrated Manufacturing Systems*, 28, 998-1009.
- Sumathi, M., Prabu, S., & Rajkamal, M. (2023). Cricket players performance prediction and evaluation using machine learning algorithms. In *Proceedings of the 1st IEEE International Conference on Networking and Communications 2023, ICNWC 2023*. DOI: 10.1109/ICNWC57852.2023.10127503
- Šuštaršič, A., Videmšek, M., Karpljuk, D., Miloloža, I., & Meško, M. (2022). Big data in sports: A bibliometric and topic study. *Business Systems Research*, 13(1), 19-34. DOI: 10.2478/bsrj-2022-0002
- Van Eetvelde, H., Mendonça, L. D., Ley, C., Seil, R., & Tischer, T. (2021). Machine learning methods in sport injury prediction and prevention: A systematic review. *Journal of Experimental Orthopaedics*, 8(1), 27. DOI: 10.1186/s40634-021-00346-x
- Wickramasinghe, I. (2020). Naive Bayes approach to predict the winner of an ODI cricket game. *Journal of Sports Analytics*, 6, 75-84. DOI: 10.3233/jsa-200436
- Wickramasinghe, I. P. (2014). Predicting the performance of batsmen in test cricket. *Journal of Human Sport and Exercise*, 9(4), 744-751. DOI: 10.14198/jhse.2014.94.01