Internship Project Report

Cover Page

Project Title: IPL-2024-Data-Analytics-ML-DL-Model

- **Internship Period:** 5th January 2025 to 14th March 2025
- **Student Name:** Mayank Joshi
- **Course:** BTech (AI & ML), 1st Year
- **University:** Amrapali University
- **Mentor Organization:** YBI Foundation

Acknowledgment

I would like to express my sincere gratitude to my mentors at **YBI Foundation** for their invaluable guidance and support throughout my internship. Their insights and feedback played a crucial role in enhancing my skills, and this experience has been instrumental in shaping my AI/ML journey.

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Methodology

Methodology Infographic

The methodology followed in this project includes several key steps, from data collection to predictive modeling. The structured workflow ensured accurate and reliable analysis of IPL 2024 player performance.

Results and Analysis

Data Visualization Charts

The analysis successfully identified the **top-performing players** across different categories, forming an optimized playing XI:
- **4 Bowlers**
- **3 All-rounders**
- **3 Batsmen**
- **1 Wicketkeeper**

Additionally, the **deep learning model** was able to forecast **individual player performances** based on historical trends, assisting in strategic team selection. The insights were visually represented through **bar graphs, pie charts, and heatmaps**, making the data easier to interpret and analyze.

Challenges Faced ⚠

Throughout this internship, I encountered several challenges that tested my problem-solving skills:
- **Debugging complex ML/DL models** – Some errors required extensive troubleshooting.
- **Fast-paced learning curve** – Understanding deep learning concepts in a short period was challenging.
- **Data preprocessing issues** – Cleaning and structuring IPL data for analysis took considerable effort.

Despite these challenges, persistence and guidance from mentors helped me successfully complete the project.

Learnings and Takeaways

This internship was a transformative experience, equipping me with valuable hands-on expertise:
Machine Learning & Deep Learning – Implementing AI models for real-world problems.
Data Analysis & Visualization – Extracting meaningful insights from complex datasets.
Predictive Modeling – Forecasting player performances using AI techniques.
Debugging & Problem-Solving – Overcoming technical hurdles effectively.

Conclusion and Recommendations

The **IPL-2024 Data Analytics ML/DL Model** provided valuable insights into **team selection and player performance evaluation**. The application of **machine learning and deep learning** significantly enhanced prediction accuracy.

Future Recommendations:
- Fine-tuning ML/DL models for **improved predictive accuracy**.
- Integrating **real-time data streams** for live player performance analysis.
- Expanding dataset features to include **pitch conditions and weather impact**.

Overall, this internship has been an invaluable stepping stone in my AI/ML journey, and I look forward to applying these skills to future projects.

References and Appendices

1. **YouTube Video:** Link – Used for structuring the project and key data analysis techniques.
2. **ChatGPT:** Used as a supplementary tool for debugging and resolving technical challenges during the project. It helped in clarifying concepts, generating ideas, and troubleshooting code errors.
