

Project Charter

Project Identification	
Name or Title	Player Performance Analysis in Cricket.
Description	Cricket selection often suffers from biases influenced by personal preferences or peer pressure, affecting team performance. This project aims to build an objective, data-driven framework for player performance analysis using advanced analytics and machine learning. It will assess players across multiple metrics—batting, bowling, fielding, and consistency—to remove subjectivity and enable fair selection. The results will assist coaches and selectors in making transparent, performance-based decisions.
Project Sponsor	John Ulakovich
Project Manager	Tanzeel Ahamad
Start Date	January 2025
Finish Date	July 2025
Estimated Budget	\$185,000 USD

Project OBJECTIVES (purpose)
Eliminate selection bias in cricket by developing an objective model.
Evaluate players using comprehensive metrics (batting, bowling, fielding, consistency).
Implement machine learning for performance forecasting.
Develop a transparent system for identifying top-performing players.
Enable coaches and selectors to make informed decisions grounded in data.

PROJECT'S CRITERIA FOR SUCCESS (MUST BE MEASURABLE)
Achieve at least 85% accuracy in player performance predictions.
Effectively classify players into performance tiers with at least 90% precision.
Receive at least 80% positive stakeholder feedback on dashboard usability and insights.

Project SCOPE - HIGH LEVEL (INCLUDE PRODUCT AND PROJECT MANAGEMENT SCOPE)
Build a machine learning-based player evaluation and selection system.
Develop a web-based interface for data input and visualization.
Create a Power BI dashboard for insights and decision-making.
Assign responsibilities and roles among team members.
Manage risks associated with data quality, model accuracy, and stakeholder expectations.
Prepare final documentation and presentation for project submission.

KEY PROJECT DELIVERABLES	
Name	Description
Raw Data Collection	Gather historical cricket player data from verified sources. (ESPN)
Exploratory Data Analysis	Identify trends, correlations, and key statistics from the dataset.
Feature Engineering	List of selected features and their impact on model performance
Machine Learning Model	Trained models for predicting player performance and classification.
Web-Based Interface Development	Build an interactive web app for data input, updates, and model interaction
Visualization Dashboard	Interactive Power BI based dashboard displaying player insights.
Final Report	Detailed documentation of project approach, findings, and recommendations
Project Presentation	Summary of project results and key insights for stakeholders.

HIGH-LEVEL SCHEDULE		
Item	Major Events / Milestones	Dates
1.1	Project Initiation & Planning	01/01/2025

1.2	Data Collection & Preprocessing	01/20/2025
1.3	Exploratory Data Analysis	02/20/2025
1.4	Feature Engineering	03/01/2025
1.5	Model Development & Evaluation	03/20/2025
1.6	Dashboard Design & Implementation	03/31/2025
1.6	Interim Project Report	04/04/2025
1.7	Interim Project Presentation	04/11/2025
1.8	Web Interface Design (Wireframes/UX)	05/01/2025
1.9	Web Development (Frontend + Backend)	05/20/2025
2.0	Final Testing & Validation	06/15/2025
2.1	Final Report & Documentation	06/25/2025
2.2	Final Presentation	06/30/2025
2.3	Project Closure	07/01/2025

CONSTRAINTS (Time, budget AND TECHNICAL)	
Constraint Description	
The project must be completed by July 2025	
The model must be developed using Machine Learning techniques optimized for accuracy and efficiency.	
The final model should integrate with a dashboard or visualization tool (e.g., Power BI, Tableau) for player ranking and selection insights.	
Expenses for hardware, software, and development tools must be planned efficiently.	

Assumptions
Description
Complete and reliable performance data is available from ESPN
ML libraries (e.g., scikit-learn, XGBoost) and web frameworks (e.g., Flask, Streamlit) are compatible
Dashboard tools are available and accessible
Players' performance metrics will correlate well with match outcomes

RISKS
DESCRIPTION
Insufficient or poor-quality player performance data may affect the accuracy and reliability of the machine learning model.
The dataset may contain biases that could lead to unfair player selection, requiring careful preprocessing and validation.
The machine learning model may not achieve the desired accuracy, leading to unreliable predictions.
Issues may arise while integrating the model with a dashboard or visualization tool.

SIGNOFF			
	Signatures and Comments		
	Name	Signature	Date
	John Ulakovoich(Sponsor)	John Ulakovoich	04/03/2025
	Tanzeel Ahamad (Project Manager)	Tanzeel Ahamad	04/03/2025
	Mary Keerthi Palepu (ML Engineer)	Mary Keerthi Palepu	04/03/2025
	Yash Sharma (Power BI Engineer)	Yash Sharma	04/03/2025
	Malavika Pallikkad Raju(Web developer)	Malavika	04/03/2025

Mohammed Habeeb Uddin Ifham(UI/UX Designer, Documentation)	Habeeb Uddin	04/03/2025
Comments:		