Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	25 March 2025
Team ID	PNT2025TMID06994
Project Name	Global Food Production Trends and Analysis (1961-2023) Using Power BI
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement	Sub Requirement
FR-1	Data Input & Management	Users can upload food production datasets in CSV or Excel format. The system validates the format and structure of uploaded data.
FR-2	Data Preprocessing & Cleaning	The system should clean, normalize, and structure data for consistency and accuracy.
FR-3	Feature Selection & Model Training	The system identifies the most relevant features affecting food production.
FR-4	Prediction & Recommendations	The system predicts future food production trends based on historical data. It provides recommendations for improving yield (e.g., soil health, climate impact).
FR-5	Visualization & Insights	Users can view interactive dashboards with trends and reports.
FR-6	Model Updates	Admins can retrain models with new data for improved accuracy.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Dashboards should be user-friendly and accessible.
NFR-2	**Security**	Users must authenticate via email & password before accessing data.
NFR-3	**Reliability**	The system should work accurately and without failures.
NFR-4	**Performance**	The system should process large data records Predictions should be generated quickly for standard queries.
NFR-5	**Availability**	The system should be accessible in all of the time.
NFR-6	**Scalability**	System should handle large datasets efficiently with the data growth