Project Initialization and Planning Phase

Date	3 Oct 2025
Team ID	SWUID20250181666
Project Title	Global Food Production Trends and Analysis: A Comprehensive Study from 1961 to 2023 Using Power BI
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This proposal outlines a targeted solution to address the complexities involved in analyzing and understanding global food production data. By establishing a clear objective, defining the project's scope, and articulating a precise problem statement, the approach leverages data analytics and visualization techniques to generate meaningful insights that support strategic decision-making.

Project Overview	
Objective	To build a comprehensive Power BI dashboard that analyzes global food production trends from 1961 to 2023, enabling stakeholders to visualize historical patterns, compare regional outputs, and derive actionable insights for strategic planning in agriculture and food policy.
Scope	The project covers the full lifecycle of data analytics—from sourcing and cleaning historical agricultural data to modeling, visualizing, and reporting. It includes key commodities such as rice, wheat, maize, tea, coffee, grapes, apples, bananas, and oranges. The dashboard will allow users to filter by crop, region, and year, and will be optimized for performance and stakeholder accessibility.
Problem Statement	
Description	Stakeholders in agriculture and food policy often struggle to interpret long-term production data due to its fragmented nature across regions and commodities. This lack of consolidated, visual insight hinders effective decision-making and strategic planning.
Impact	By solving this problem, the project will empower users to identify growth trends, regional strengths, and commodity performance over time. This will support better resource allocation, policy formulation, and supply chain optimization across the global food ecosystem.

Proposed Solution	
Approach	• Extracting historical data from reliable sources • Cleaning and transforming data using Power Query • Modeling relationships between entities and commodities • Designing visualizations that highlight trends and comparisons • Generating reports and exportable insights for stakeholders
Key Features	• Interactive charts for staple crops and fruits • Region-wise and year-wise filters • Comparative visuals for commodity volumes • Exportable reports for stakeholder sharing • Performance-optimized dashboard with responsive design

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, processing capability	Desktop/Laptop with Intel i5/i7 Processor
Memory	RAM specifications	Minimum 8 GB RAM
Storage	Disk space for data, models, and logs	256 GB SSD or 500 GB HDD
Software		
Frameworks	Frameworks	Microsoft Power BI Desktop
Libraries	Data transformation and modeling tools	Power Query, DAX query view
Development Environment	IDE, version control	Power BI Service, GitHub
Data		
Data	Source, size, format	Kaggle dataset on Global Food Production (CSV format)