Project Initialization and Planning Phase

Date	24 June 2025
Team ID	38
Project Title	Global Food Production Trends and Analysis
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview

Objective

To analyze and visualize global food production trends from 1961 to 2023 using Power BI, in order to assist stakeholders in making informed decisions based on crop production patterns, regional performance, and historical data.

Scope

This project covers the analysis of production trends for major food commodities such as rice, wheat, maize, tea, coffee, and fruits like apples, bananas, oranges, and grapes across different countries and continents. The scope includes data integration, visualization, and pattern analysis.

Problem Statement

ABC Company undertook a comprehensive study of global food production trends from 1961 to 2023, leveraging Power BI for insightful visualizations. The analysis encompassed key agricultural commodities, revealing that total rice production amounted to 269 billion tonnes, while wheat production reached 282 billion tonnes. The study highlighted that tea production stood at 2 billion tonnes, with Africa emerging as the leading producer of green coffee. Additionally, the research underscored a steady rise in wheat, maize, and rice production over the years, with wheat showing the most significant increase. The project also explored the production volumes of apples, avocados, bananas, and oranges by different regions, identifying Europe and Asia as significant contributors. Maize production

demonstrated consistent growth, particularly from the late 1980s onward. The study further indicated that grapes had the highest total production among fruits at 43 billion tonnes, followed by apples, bananas, and oranges. This comprehensive analysis equips ABC Company with valuable insights to better understand global food production trends, aiding strategic decision-making in the agricultural sector.

Proposed Solution

Approach

We will use Power BI to clean, integrate, and visualize food production data. Analytical dashboards will be built to present yearly and regional trends, and highlight key insights using charts such as area charts, bar graphs, and donut charts.

Key Features

- Interactive dashboards
- Year-wise and commodity-wise analysis
- Region-based comparison
- Trend forecasting
- Exportable visuals for reports

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware	Computing Resources	Intel Core i7.8 cores/2x NVIDIA RTX 3060 GPUs
Hardware	Memory	16 GB DDR4 RAM
Hardware	Storage	1 TB SSD
Software	Development Environment	Power BI Desktop, Microsoft Excel (for preprocessing)
Software	Frameworks	Power BI Desktop
Data	Data	FAOSTAT, CSV format, ~100,000 records