## **Project Design Phase Solution Architecture**

Date	23 March 2025
Team ID	PNT2025TMID06677
Project Name	Global Food Production Trends and Analysis A Comprehensive Study from 1961 to
	2023 Using Power BI
Maximum Marks	4 Marks

## **Solution Architecture:**

The solution architecture for **Global Food Production Trends and Analysis** integrates historical and real-time data from sources like FAO, IoT sensors, and weather APIs. Data is ingested, cleaned, and processed using AI/ML models for predictive analytics and anomaly detection. Power BI dashboards provide dynamic visualizations, enabling researchers, policymakers, and agribusinesses to make data-driven decisions.

## **Example - Solution Architecture Diagram:**

## Power BI-based Plant Growth Prediction System Architecture DATA SOURCES DATA STORAGE ATA PROCESSING SQL Historical Azure SQL Google Growth Data Power Query DAX Dataset Calculations Environmental Data **CSV Files** ANALYTICS & VISUALIZATION S USER INTERACTION 0 Data Farmers Analysts Agritech Researchers Power BI Power BI Dashboards 0 0 Pest and Reports Farm Agricultural Managers Extension Decomposition

Figure 1: Architecture and data flow of the voice patient diary sample application