**Data Collection and Preprocessing Phase**

| Date | 10 oct 2025 |
| --- | --- |
| Team ID | SWUID20250216152 |
| Project Title | Predicting plant growth stages with environmental and management factors |
| Maximum Marks | 2 Marks |

**Data Collection Plan & Raw Data Sources Identification**

Elevate your data strategy with the Data Collection Plan and the Raw Data Sources report, ensuring meticulous data curation and integrity for informed decision-making in every analysis and visualization phase. This plan outlines where the data originates, how it is collected, and how it supports the Power BI–based predictive analysis for plant growth optimization.

**Data Collection Plan Template**

| **Section** | **Description** |
| --- | --- |
| Project Overview | This project focuses on analyzing environmental and management factors affecting plant growth. Using **Power BI**, the goal is to predict plant growth stages by exploring data related to **soil type, sunlight hours, watering frequency, fertilizer type, temperature, and humidity**.  The insights will help optimize growing conditions, improve yield, and promote sustainable agriculture. |
| Data Collection Plan | The dataset was collected from **controlled greenhouse experiments** and **agricultural monitoring systems**. Environmental parameters were recorded using **IoT-based sensors** and **manual log entries** maintained by agricultural experts.  All data was consolidated, cleaned, and formatted for use in Power BI to enable effective visualization and prediction. |
| Raw Data Sources Identified | Contains 193 records with 7 key attributes: soil type, sunlight hours, water frequency, fertilizer type, temperature, humidity, and growth milestones. Used to analyze and predict plant growth stages. |

**Raw Data Sources Template**

| **Source Name** | **Description** | **Location/URL** | **Format** | **Size** | **Access Permissions** |
| --- | --- | --- | --- | --- | --- |
| Dataset | Predicting plant growth stages or milestones with environmental and management factors | <https://www.kaggle.com/datasets/gorororororo23/plant-growth-data-classification> | CSV | 20 KB | Public |
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