**Project Proposal:** Predicting Crop Growth Using Weather Data

**Our Goal:**  
This project aims to create a smart tool using weather history and crop growth data. By mixing these datasets, we want to build a machine learning model that can predict how well crops might grow based on past weather.

**Data:**

* Gathering and Combining Data: Acquire reliable weather history data and statistics on agricultural yield from Kaggle, a trustworthy platform with a large collection of verified datasets. To produce a large dataset for analysis, combine and preprocess various datasets.
* Feature Engineering and Selection: Determine relevant meteorological variables and prepare the data to make sure machine learning algorithms can work with it. Examine the relationships between weather and crop productivity to identify the main determinants.
* Model Development: To build and train the prediction model, use a variety of machine learning approaches, such as neural networks, decision trees, and regression. Evaluate the model's performance with the right assessment measures.

**Interpretation and Visualization:**

Showcase the predictions made by the model and the conclusions drawn from the analysis. Determine which weather elements have a substantial impact on agricultural yield, then interpret the results for real-world uses.

**Datasets:**  
We're getting our data from Kaggle, which has good-quality data approved by lots of people. The info includes weather history and how well crops did in the past.

**Why It Matters**  
Understanding how weather affects crops is super important. It helps farmers plan better and deal with tricky weather. Our project can help make farming smarter and less risky.

**Reference:**

*Crop Yield Prediction Dataset*. (2021, December 1). Kaggle. <https://www.kaggle.com/datasets/patelris/crop-yield-prediction-dataset>

*Weather Dataset*. (2017, December 4). Kaggle. <https://www.kaggle.com/datasets/muthuj7/weather-dataset>