# Data Analysis Project

## Data Analyst: Many You

## Client/Sponsor: Best Lettuce Corporation

## Purpose:

## The objective of this project is to optimize lettuce growth by identifying the most favorable environmental conditions. We will focus on four key attributes: temperature, humidity, TDS (Total Dissolved Solids) value, and pH level. By analyzing the correlation between these factors and lettuce growth days across all stages, we aim to determine their impact. Additionally, we’ll explore whether certain attributes play a more significant role in specific growth stages. Once the analysis is complete, we’ll formulate hypotheses regarding the optimal attribute values for each growth stage and validate them through controlled experiments in a lettuce-growing environment.

## Scope / Major Project Activities:

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| --- | --- |
| Activity | Description |
| Data collection | Acquiring historical growth data, including temperature, humidity, TDS (Total Dissolved Solids) value, and pH level, from the farming department’s database. |
| Identify correlation | Analysis of the historical data to determine the relationship between the growth day and the four attributes. |
| Identify and test the optimal condition | Hypothesis testing of the best set of environmental conditions for each growth stage of lettuce. |
| Create recommendation on the optimal condition | Create a lettuce farming condition schedule based on the optimal condition test result. The recommendation will consider the feasibility of implementing the method. |
| Deliver final report | Providing the farming department with the final report summarizing findings and recommendations. |

## This project does not include:

* Analysis on other environmental attributes besides those stated
* Analysis on the farming techniques
* Implement the recommendations

## Deliverables:

*A specific list of things that your project will deliver.*

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| --- | --- |
| Deliverable | Description/ Details |
| Recommendation | Recommended temperature, humidity, TDS (Total Dissolved Solids) value, and pH level values in each stage of the lettuce growing to reduce growth time |
| Final report | A final report that contains a summary of the analysis and the recommendation for growing lettuce |
|  |  |

## Schedule Overview / Major Milestones:

*The expected schedule for the project. This can be defined by milestones (e.g. “all data is cleaned and processed”), periods of time (“Week 1 / Week 2”), or other ways based on the needs of the project.*

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| --- | --- | --- |
| Milestone | Expected Completion Date | Description/Details |
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|  |  |  |

## \*Estimated date for completion:

*This is my “if all goes well and I have everything I need, this is when I’ll be done” date.*