Today’s society forces us to stay on our toes with work, family or friends leaving little time to care for the potential herbs we can grow. Additionally, the influx of information can be a little too much to handle. Herb-S-Mart is perfect solution designed to produce premium results with minimal human intervention. It takes away several control factors away from the user to reduce their responsibility and their need to continuously monitor the growing conditions for herbs. Our Herb growers learners kit is an all in one package to help the user learn and master the growing of herbs.

Objective

- Design a compact self sustainable system to grow herbs at home.
- Ensure self-sustainability of the system for up to 3 weeks.
- Have a repository of plant information for user learning and preset configuration per herb.
- Measure against external tools and validate that the system’s tools are measuring and outputting accurately.
- Fall within ±5% of the required configured EC and PH values in the water.
- Make the web application user-friendly

Design Overview

![Diagram of Herb-S-Mart system]

- PH Up/PH Down
- Nutrient Emitter
- LED
- PH Sensor
- EC Sensor
- Lux Sensor
- Raspberry Pi

Conclusion

- Allowing the home-owners to grow herbs in a limited space.
- Positive environmental impact assuming high adoption through water and nutrient conservation.
- Minimize human intervention in the process of growing herbs.
- Created a system for the consumers to learn how to grow herbs while giving them a choice to change the environmental parameters.

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Ethics Statement

To develop the ‘HERB-S-MART project, team members only used the hardware and software legally available to them.