

Desktop Greenhouse

Team 9 - Plant People

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Societal Issue:

The world is facing higher rates of mental illness due to the pandemic and stay at home orders. 1 in 5 people currently experience mental illness such as depression, ADHD, anxiety, and schizophrenia. With this number growing, we are addressing this issue by bringing plants and fresh air into peoples homes. House plants have proven to increase happiness, and wellness in people who live among them. Our desktop greenhouse will provide the freshair and liveliness that people are lacking in their homes and work spaces.

Our Solution:

Evidence shows that plants can lower stress, anxiety, blood pressure, and symptoms of depression, thus increasing overall life satisfaction and wellness. Caring for plants can serve as a great complimentary form of treatment for people that suffer from mental illness. Our greenhouse will provide the proper, customized care the plant requires by monitoring its moisture, humidity, ventilation, light, and temperature levels. It is automated to water the soil, ventilate, shade, provide light, and humidity based off the plants specific needs. It will also track the plants growth by taking photos of it periodically for the users review. This will eliminate the need for constant attention and tasks the user will have to do to have a healthy plant. The greenhouse will bring the liveliness and joy of having a plant into the users home without the extra stress.



How it Works:

Our greenhouse is designed to tend to all of the plants needs. It utilizes a variety of sensors to make readings of the surrounding environment of a particular indoor plant. The monitors will communicate with the hub which then adjusts the levels as needed. In order to meet the plants optimal levels of moisture, temperature, lighting, humidity, and ventilation the hub will turn on any neccessary systems in order to bring it up or down to its optimal levels. The greenhouse is also designed to bring the user into the plant growth process by capturing photos of it and autogenerating emails for the user to view.

Completed Protoype:

Our greenhouse is currently fully automated to care for a plant. It monitors nd provides automated responses for the following parameters:

- > Daily lighting
- > Humidity Levels
- > Soil Moisture
- > Temperature control
- > Ventilation system

The optimal levels are set by the user after the plant has been potted.

