

Project Goals

Group #12 – Botanica

SproutBot

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Project Description

Taking care of a houseplant is not a trivial task, and this becomes more complicated when the owner is not at home or if the owner forgets to take care of the plant when they are out. The solution to this problem, and our objective, would be to have a robot capable of taking care of these plants when the user is absent. The goals will delve into what the robot should accomplish when a plant cannot be taken care of in person.

Fundamental Goals

These are the goals that our robot must achieve at its completion, to be considered successful.

- The robot must be capable of motion. Most plant maintenance machines are designed to be static, which is where our robot would stand out in being able to take care of plants while staying out of the way when needed.
- The robot must be capable of providing a plant with the necessary amount of water. Plants need to be watered regularly, on a schedule, and our robot would reduce the need for a plant owner to water the plants by hand.
- The robot must minimize damage and not negatively affect its environment. Safety is an important priority to factor in, so the robot must be designed to cause the least harm or damage to its surroundings.

Non-Fundamental Goals

These goals are not necessary for the successful completion and operation of the robot, but complement the fundamental goals, improving functionality of the final product.

- The robot could be capable of automating some tasks. A user may want to avoid performing some tasks manually, and have the robot autonomously perform these plant care tasks without the user's immediate attention.
- The companion program could provide information on a plant. A user may want to know more about a plant, so the companion program could be used to provide tailored information about it, along with information on what it may require to grow healthily.
- The robot could be capable of providing other forms of nourishment. A plant needs more than just water to grow, so the robot could also help the plant obtain other things, such as light.