**Growing Plants with the Power of Robotany**

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The goal of this project was to create a digital system to monitor the growth of a plant and regulate the environmental variables to optimize growing conditions. An Arduino system was used to read light, temperature, humidity, and soil moisture data, and to control a light source and a water source. The data was sent via Wi-Fi connection to a desktop server program, which stored and analyzed the data, and sent watering and lighting schedule information back to the Arduino. An Android app pulled plant growth data from the server to display to the user, and allowed the user to manually alter variables on the server.

A camera attached to the Arduino took pictures of the plant, which the server program analyzed to determine the health of the plant. It considered factors such as height of the plant, color, number of leaves, and size of leaves.