AgTech Challenge 1: Smart Watering Drip System

Common barriers to home gardening (and growing food) is the time requirements and making informed care decisions. A solution that could help both of these is a self-watering drip irrigation system. If a household is equipped with a rain barrel and drip irrigation lines, an automated solution could control watering of the plants.

Each night at 8:00 PM, the algorithm would need to calculate the amount of moisture in the soil and compare it to the ideal value, incorporate the expected rain for the next 24 hours, and open the valve to release the ideal amount of collected rainwater.

Design an AgTech solution that would control watering of plants through a drip irrigation system. The solution would need to be able to:
- connect to the home's Wi-Fi network

- gather information about expected rain amounts

- read moisture levels in the soil, and

- open the water valve for the calculated period of time.