## Al System for Environmental Monitoring:

- Components: AI module, Soil Moisture Sensor (SM),
  Temperature Detector (T), Light Detector (L)
- Functionality: Real-time data collection on plant environmental conditions.
- Objective: Replace traditional plant care methods and streamline monitoring.

#### **Soil Moisture Level Adjustment:**

- Components: Soil Moisture Sensor (SM), Watering System
- Functionality: Adjust watering when dry soil is detected (SM True), maintain routine when within the desired range (SM = False).
- Objective: Optimize water usage, ensure adequate moisture for plants.



## **Temperature Optimization:**

- Components: Temperature Detector (T), Temperature

  Control System
- Functionality: Adjust temperature outside the desired range (T = True), maintain conditions within the desired range (T = False).
- Objective: Create an optimal climate for plant growth.

### User-Friendly Interface:

- Components: Mobile/Web Application, User
   Dashboard
- Functionality: Real-time monitoring, personalized recommendations based on collected data.
- Objective: Enhance user engagement and satisfaction.

# **Adaptive Light Control:**

- Components: Light Detector (L), Light

  Adjustment System
- Functionality: Dynamically adjust lighting conditions based on insufficient light detection (L = True).
- Objective: Ensure plants receive optimal light for photosynthesis.