UNIVERSITI TEKNOLOGI MARA

INTELLIGENT DEVICE SYSTEM TO MONITORING INDOOR PLANT'S CONDITION

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ABSTRACT

Home plant care entails giving adequate watering, sunlight, and nutrients to encourage growth and health. Regular monitoring, pruning, and pest management are required to keep indoor plants lively and healthy. People frequently neglect the demands of indoor plants in the midst of their hectic daily routines. Neglected watering, poor sunlight, and care deny these green companions the attention it deserves, negatively harming its vitality and overall well-being. This technical report describes the creation of a smart monitoring system for home plants that uses a NodeMCU module to regulate appliances, especially for people who are unable to taking good care of the plants due to their priority and daily routine. The objective of this project is to design and develop a prototype of an automatic watering system for indoors plant. This report aims to design Intelligent Device System for Monitoring Indoor Plant's Condition using Arduino Microcontroller. There are 5 inputs being in this project to detect the light intensity, soil moisture, temperature, and the presence of insect. These 5 inputs then will give results as the output for this project which can supply enough nutrient and the suitable environment for the home plants. This project will make it easier the people to monitoring, treating, and effectively pruning the indoor plants during workday or busy with daily routine.

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INTRODUCTION

1.1   Research Background

Home plant management refers to the care and maintenance practices used to ensure the health and growth of indoor plants. It means giving appropriate irrigation, sufficient sunlight, regular fertilization, pruning, and insect control. Monitoring the plant's health, treating concerns as they develop, and providing an appropriate environment are all crucial elements of efficient home plant treatment. Taking care of plant is much harder than people think. In fact, seven in 10 millennials consider themselves "plant parents," according to new research.

While millennial demand for houseplants is high, the poll of 2,000 millennials (aged 25–39) discovered 67% say taking care of plants is more of a challenge than they bargained for. Almost half don't currently own plants because they don't know how to take care of them — and 20% would sooner sit through a root canal than take care of a plant because of the pressure [1]. Based on this article, people also need to prepare well before planning to take indoor plant in their house for interior house design and as a therapy to release stress or tension after workday is finished.

1.2   Problem Statement

Nowadays, people are getting stricter and focusing more on the duty to sustain life. In the article of News Straits Time said that "a survey has found that Malaysian employees are overworked, and sleep deprived, with 51% suffering from at least one dimension of work-related stress as well as 53% getting less than seven hours of sleep in a 24-hour period" [2]. It is proved that the home plant or indoor plant are getting abandon by the