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HYGIENIC RELAXATION AIR PURIFIER MONITOR

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ABSTRACT

With the advancement of technologies and construction around the globe, the pollution produced while chasing the vision of high-tech cities and community leaves behind great impact on the cleanliness of the air that we breath in in our daily life. Toxic gases like Carbon monoxide (CO) is one of the main enemy to our healthy lung. Carbon monoxide (CO) is a colorless, odorless, and tasteless gas that consists of one carbon atom and one oxygen atom. It is produced through incomplete combustion of carbon-containing fuels, such as wood, gasoline, natural gas, and oil. Carbon monoxide is a highly toxic gas that can pose significant health risks when inhaled, as it binds to hemoglobin in red blood cells more readily than oxygen, leading to a reduction in the oxygen-carrying capacity of the blood. Exposure to elevated levels of carbon monoxide can result in symptoms such as headaches, dizziness, nausea, confusion, and, in severe cases, can be fatal. Carbon monoxide detectors are commonly used to monitor indoor air quality and provide early warnings of potential leaks. Other than that, harmful particles like dust or microorganism around the air may cause allergic reaction if one does not practically wear mask. Lately, people tend to stay indoors due to unpredicted weather or work from home policy. Thus, this can be quite worrisome. People who have tight schedule or being preoccupied with their job might have no time or energy to tend their room or household which can be quite an issue. Malaysia is one of the few countries that has variable weather. Rain and high winds can cause interior damage in an unattended room or residence with open windows. As a result, this research contributes to reducing the burden and providing a safe place by developing an indoor air quality monitoring and environment-dependent control system based on an IoT system. This system may monitor air quality and the environment, such as carbon monoxide levels, humidity levels, and temperature within a closed room or area, and the system will automatically open and close the windows based on the threshold values specified.

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1.2 Problem Statement

In the midst of increasing pollution levels in our surroundings, the pressing issue of deteriorating air quality becomes a significant concern. The air we breathe is laden with pollutants, and the lack of effective means to monitor and address this pollution poses a potential threat to our well-being. It becomes imperative to develop solutions that provide users with real-time information about the air quality to empower them to make informed decisions regarding their health and environment.

Adding to the challenge is the absence of accessible information on crucial environmental parameters such as temperature and humidity. Users are often left in the dark about the prevailing atmospheric conditions, hindering their ability to adapt and respond appropriately. Developing a system that not only monitors pollution levels but also incorporates temperature and humidity data can offer a comprehensive solution, allowing users to better understand and navigate their surrounding environment.

Furthermore, the unawareness of harmful elements presents in the air, such as dust particles and dangerous gases like carbon monoxide, compounds the risks associated with pollution. Without the means to detect and measure these invisible threats, individuals may unwittingly expose themselves to health hazards. Implementing an integrated monitoring system that detects various pollutants, including harmful gases, ensures a safer and healthier living environment. By addressing these three problem statements collectively, we can work towards creating a solution that promotes air quality awareness, empowers users with vital information, and contributes to a healthier and more sustainable living environment.