**Detection of VOCs in Enclosed Space Using a Sensor Array**

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***Abstract*—** In an era where rapid industrialization and urbanization continue to shape our environment, ensuring the safety and well-being of individuals in enclosed spaces is of paramount importance. One of the key challenges in this endeavour is the detection of toxic gases and volatile organic compounds (VOCs) that can pose severe health risks if left undetected. So, the primary motive of this model is to design and implement a sensor array system comprising five specialized sensors which are capable detecting a wide range of toxic gases. Employing Raspberry Pi and Arduino platforms for simultaneous data acquisition, the project sought to improve accuracy and real-time monitoring. The system's versatility extended to the detection of volatile organic compounds, with applications spanning industrial, residential, and laboratory settings. Calibration procedures were rigorously undertaken to enhance measurement reliability. The key results of this endeavour encompassed the successful development and calibration of the sensor array, culminating in a comprehensive solution for toxic gas detection in enclosed spaces. Ultimately, this project contributes significantly to safety and environmental well-being.

***Keywords***— **Raspberry Pi, Real Time,** **Safety, Toxic Gases, VOCs.**