

## **ABSTRACT**

*Air pollution occurs when pollutants in the atmosphere disturb the dynamic balance of the atmosphere at specific concentrations that can affect people and the environment. Air quality is one factor that determines the health of the environment, and the better the air quality, the better the health quality. For this reason, the authors have developed a tool that can predict contamination levels using the MQ-135 sensor, MQ-7 sensor, TGS-2602 gas sensor, and Arduino Uno-based sound sensor. The Air Pollution Standards Index (ISPU) serves as a quality calculation. It has intended to facilitate monitoring NO<sub>2</sub> and CO gas levels that can cause air pollution, determination of NH<sub>3</sub> and H<sub>2</sub>S odor levels, and measurement of noise levels that can cause pollution. increase.*

*The resulting tool implementation data is stored in Firebase and displayed on the website. Perform data calculations using Air Pollution Standard Index (ISPU) and noise threshold in dBA. To analyze air pollution using NO<sub>2</sub> gas levels and noise using dBA. Estimates are made using data collected for one hour on weekends in the afternoon and evening, then for weekdays in the afternoon and evening (1 day).*

*The area with a low noise level is Cigantiri on weekday afternoons with a value of 44.51, and the site with a high noise level is Ciganitri on weekday afternoons with a value of 111.78. The area with a low level of NO<sub>2</sub> gas air pollution is Cigantiri on a weekend afternoon with a value of 56,75, and the site with a high level of NO<sub>2</sub> gas air pollution is ISBI on a weekend afternoon with a value of 178,23.*

*Keyword: Arduino Uno, Air Pollution, MQ-135 Sensor, TGS 2602 gas sensor*