

Sistem Pengukuran Tingkat Pencemaran Udara (Karbon monoksida (CO) dan Nitrogen Dioksida (NO₂)) Pada Sektor Pertanian Dengan Metode Logika Fuzzy Berbasis IoT (*Air Pollution Level Measurement System (Carbon Monoxide (CO) and Nitrogen Dioxide (NO₂)) In Agriculture Sector Using IoT-Based Fuzzy Logic Method*)

Pembimbing (1 orang).

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ABSTRACT

Air pollution is currently increasing due to human activities that create high levels of gas concentrations, one of which is from the agricultural sector which produces greenhouse gasses. Thus, causing some bad effects for the survival of living things, especially humans. Agriculture contributes about 14% of greenhouse gases on a global scale and 7% on a national scale. These results were obtained from measurements made by the agricultural service using a hood to capture air pollutant gasses and a laboratory to measure the concentration of air pollutant gasses. However, currently, in Jember Regency, the equipment needed to conduct sampling and a laboratory to measure the gas concentration level is still inadequate. To overcome these problems, the researcher designed an IoT-based system that can measure the level of air pollution by using parameters including CO gas and NO₂ gas. The results of the test, the accuracy of the Sugeno fuzzy algorithm in the current study is 100%. While the error rate of the CO sensor is 11.4% and the error rate of the NO₂ sensor is 6.66%.

Keywords: *Internet of Things, Fuzzy Sugeno, air pollutant, Agriculture*