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| Title | **Internet of Things (IOT) Based System for Monitoring and Controlling Air Pollution** |
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| Abstract | The abstract explain of introduction of pollution air became the problem. One of the factors is industrialisation which can be harmfull for the human. Developing the system that can give information about air pollution from several harmfull gasses can make easier by IOT monitoring and controling. The system can give information of the pollution to the officer and owner direcly by mail and massage in order to action control the pollution.  Review: this abstract already give the information. But the method, system and result didn’t explain, so the audience don’t understand the IOT system used to monitoring the pollution by reading the abstract |
| Introduction | This introduction directly explisit in first sentences that “ The main objective of IoT Air Monitoring System is that The Air Pollution is an increasing issue now a days”  Internet of Things as first used in 1999 by British technology pioneer Kevin Ashton in the context of supply chain management. IoT is not just about connecting devices to the internet, but also making sense of the ‘things’ that are connected. The IoT is intelligently connected devices and systems which comprised of smart machines interacting and communicating with other machines, environments, objects and infrastructures and the Radio Frequency Identification (RFID) and sensor network technologies will rise to meet this new challenge. In each and every organization to send information about the people we use emails, website and notice boards but in most of countries internet access is available for transferring information to people via  Mobile devices and on systems which is easier, fast and less cost through internet.  Monitoring air pollution give measurement of air pollutan and sound pullution gan give information direcly. Monitoring use sensor which can detect several pullutan gasses information that can send directly to owner trought message and mail.  Review: this introduction already tell the main issue of air pollutan in industrial area and how to monitoring using IoT system so the information about air pollutan can get direcly. The gap analysis is not explain the sensor and system used and why the author choose the that IoT. |
| Related Work | This part of “Related Work” is explain of devices of sensor to khow kind of air pollution like Fluke-CO-220 carbon monoxide meter for CO, Amprobe-CO2 meter for CO2 ect.  The author establish used air quality sistem based on wireless sensor network, GSM and GIS. Author already explain of limitation each device.  The sensor can calculates concentration of gases such as CO, CO2, SO2, and NO2 using semi conductor sensors. Every sensors collect data and transfer to raspberry pi 3 based web server. After that raspberry pi transfer to cloud .  This program providing information of air pollution direcly, real time and make effective decision when emergency condition need to respon.  Review: this related work is explaind the divices to build IOT Based Sistem for monitoring and controlling air pollution. But the divices doesnt explain strenght and limitation every divices. |
| Problem Statement | This Problem Statment Give Information About The Harmfull Of Air Pollution Which Need To Control And Monitoring. So Air Condition Can Monitoring Real Time In Every Places Of Industrial Area. Used The Iot Based System Can Give The Sollution To Control The Air Pollution.  Iot Air Pollution Control Must Low Cost To Developed, So Iot Based System Can Accept In Industrial Area.  This System Has To Monitor The Harmful Gasses Like CO, CO2, SO2 And NO2 Using Semiconductor Sensors. The Sensor Transfer Informasito To Cloud Using Raspberry Pi Web Server. IOT Based Low Cost Air Pollution System Can Accepted In Industrial Area And Less Losses Of Practical Monitoring. The Iot System Is Uses Ultra-Low Power Digital Gas Sensor And Optical Dust Sensor So This System Can Be Used With High Accurancy  Review: This Part Is Explaint The Iot System Used Low Cost divice but don’t explain how the price, counting of cost effective, easy to use or program and how much every sensor divice can cover area. Because each industri has different coverage. |
| Methodology | The proposed system using the raspberry pi as a main controler.  Raspberry is multi core processor that can process every sensor and dust sensor.  The process of IoT sistem start from the sensors can detect VOC, NH3, Nox, Alcohol, Benzena, smoke, CO etc. The sensor transfer the data used Raspberry Pi and raspberry display the air condition. Raspberry pi also transfer the data to cloud by MQTT. After the cloud receive the data then the data transfer to Web App by MQTT.  After the owner get the Air condition owner can make a decision to control the air pollution. |
| Conclusion | The system using IoT Based Technology is propose to control the air pollution. The divices including sensor, raspbery pi, cloud, and web app already design. IoT technology can monitoring the air pollution direcly and continous to give information to owner of industrial.  Review: this conclusion is clear and coverage the information of article. |
| Refference | The referreces contain of 15 sources from 2002-2018. Most of the resources are journal article thats mean the resources valid and good to citation |