**REVIEW**

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| Title | **Pollution monitoring and controlling system using Internet of Things**  **(IOT)** |
| Type | e-ISSN: 2395-0056 | p-ISSN: 2395-0072 |
| Volume & Page | Volume: 06 Issue: 03 | Mar 2019 |
| Year | 2019 |
| Author | Mansi Agrawal, Chaitali Malewar, Utkarsha Thakre, Ashwini Bhosle |
| Reviewer | Akza Noprian |
| Date | 28 November 2019 |
| Objective(s) | This study examines how to design and implement an pollution monitoring and controlling system through IoT. |
| Subject | The implementation and designation of the air and sound pollution monitoring system overcomes the problem of the highly-polluted areas. |
| Strength(s) | * The system was supported by the new technology and effectively supports the healthy life concept. * The device becomes a self-protecting and self-monitoring of environment pollution level. * The system can interact with other objects through the internet and interrelated computing devices. * The system can be monitored and controlled through devices using internet and the data gathered from the sensors |
| Weakness(es) | - |

**REVIEW**

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| Title | **Smart Framework for Environmental Pollution Monitoring and Control System Using IoT-Based Technology** |
| Type | Sensors & Transducers |
| Volume & Page | Sensors & Transducers, Vol. 229, Issue 1, January 2019, pp. 84-93 |
| Year | 2019 |
| Author | Sani ABBA and Beauty Ejiroghene PATRICK |
| Reviewer | Rendi Irawan |
| Date | 28 November 2019 |
| Objective(s) | An environmental pollution monitoring and control system that can detect and monitor sound levels and the presence of harmful gases in an IoT-based environment.  Through this system sensor data can be monitored and controlled from remote locations via the internet so that environmental users can control pollution by taking the steps needed to reduce environmental pollutants. |
| Subject | The system uses Arduino UNO as the main controller and sensor used by MQ-2 gas sensor, LMVR sound sensor and the development program uses C program, supported by hardware, wifi module and web server to monitor pollution levels. |
| Strength(s) | * The proposed system provides efficient solutions and low-cost system flexibility * The system built is able to analyze and monitor the level of environmental pollution * Results from experiments and case studies show high accuracy * The system developed helps environmental users to determine the signs of environmental pollution * The proposed system can be expanded to monitor and control air and sound folusi in developed cities, industrial zones and factory health care centers for sustainable development |
| Weakness(es) | - The proposed system is carried out by conducting research with  sound sources and cellphone combinations simultaneously.  - Unstable air pollution resulting from various vehicle variations. |

**REVIEW**

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| Title | **IOT Based Smart System for Controlling Co2 Emission** |
| Type | IJSP-CSEIT |
| Volume & Page | Vol.2, Issue 2 |
| Year | 2017 |
| Author | Dr. M. Newlin Rajkumar, Sruthi M.S, Dr. V. Venkatesa Kumar |
| Reviewer | Gerry Gahara |
| Date | 27 November 2019 |
| Objective(s) | This study is to implement IoT to measure the CO2 emission from public transports, industries and forest fires using Raspberry pi which is sensitive to CO2. |
| Subject | The system consists of sensor nodes, a raspberry pi and a user interface module. This is mainly deployed to monitoring of the forest environmental conditions in an effort to predict wildfires to reduce the rate of CO2 emission. |
| Strength(s) | * Smart Sensing * Efficient Log Management * Broadcasts the most recent time atmospheric status * Users can get the current environment status using android app and web portal * Buzzer which is attached to the system gives more alert central control board * User friendly system, Because easy to use * Cost effective |
| Weakness(es) | The proposed model detects only emission of carbon dioxide. But, there are many harmful gases which pollute the environment like carbon monoxide, methane, nitrous oxide etc. |

**REVIEW**

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| Title | **Internet of Things (IOT) Based System for Monitoring and Controlling Air Pollution** |
| Type | Elixir International Journal |
| Volume & Page | Elixing Comp. Engg 130 (2019) 53082 - 53084 |
| Year | 2019 |
| Author | Vivek Waghmare, Aishwarya Hirve, Shubhangi Bhavsar, Urmila Dingore and Ruchika Mahajan |
| Reviewer | Agung Purwanto |
| Date | 27 November 2019 |
| Objective(s) | The system to monitor the air of environment using IoT technology is proposed to detect quality of air and send information to the Air Pollution Control Officer and the owner of Industry through mail and message |
| Subject | The system using raspberry pi as main controller. Also proposed system uses the different sensors like optical dust sensor (PM 2.5), digital gas sensor (CCS811), TVOC Stands for the total volatile organic compound, BMP085 as barometric pressure sensor, and MQTT is stand for message queuing telemetry transport. |
| Strength(s) | * Low cost * Can measure concentrations of gases such as CO, CO2, SO2, and NO2 * Powerless (ultra low power digital gas sensor) * High accuracy (using optical dust sensor) |
| Weakness(es) | The proposed system over comes the problem of pollution of industrial area which is measure issue and reduced man power.  Controlling air pollution in this journal just send information to Air Pollutiob Control Officer and the owner of industry. |