

Universiti Teknologi MARA

**Cloud Based Air Quality Monitoring with
Notification through Telegram**

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ABSTRACT

Air pollution can caused health problems to people that breathe the polluted air. They might start to coughing, wheezing and the heart feel tight. People will be affected as they will feel hard to breathe especially those with asthma. The polluted gases can make the lung irritating and the airways feel tight. They will have short breathe and can caused death. Sometimes they forget where they put the inhaler. This system can detect the quality of the air by using gas sensor. Next, it will give notification to user and they can take precaution steps before getting any asthma attacks. By using ESP8266 Wi-Fi module, this system can provide notification to the user through Telegram Bot in real-time. By using this module also, they can monitor the amount of polluted gases in the air in Cloud. The Cloud also can provide space for storing the data collected by the sensors.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Air pollution is one of the factor that the people died in every year. As we all know, air pollution is a mixture of solid particles and gases in the air (Medline Plus, 2016). World Health Organization (WHO) said that 9 out of 10 people breathe air containing high level of pollutants (CCAC Secretariat, 2018). If the air is dirty, people should be quarantine in the house and cannot go to anywhere. This affected the human health as the air contain harmful gases. Air pollution can cause 92 percent of people to risk of cardiovascular and premature death (Almendrala, A., 2018).

People with asthma will suffer the most, as they cannot breathe in the dirty air. Asthma is a chronic disease and caused by the inflammation of the airway through the bronchi in the lung. They will have short of breathe and cannot get enough air into their lung. It also can caused people to wheezing, coughing and make the chest feel tight.

Ozone is the common gas that have in polluted air and we called it as a smog or haze. This gas initiate asthma as it is very irritating to the lungs and airways. It also can reduce the lung function and make people more difficult to breathe deeply. Another caused of asthma is the small particles in the air that can pass through the nose or mouth. It can caused asthma attacks to occur frequently.