ABSTRACT

The dilemma of land and plantation fires is a matter that must be prevented. This is done to avoid greenhouse gas emissions that result in environmental damage. Notification alerts for fire occurrences are one of the methods that can be employed for early prevention of the spread of extensive fire-prone areas. Preventing the expansion of the fire-prone area makes it easier to extinguish the fire or ignition points. The initial step in handling this situation is early detection for preventing fires in plantations. Typically, fire detection can only be implemented in enclosed spaces. However, by using the method of satellite-based heat detection integrated into a web-based and automated system, fire detection can be conducted anywhere that can be monitored using satellites.

Therefore, a combination of UIPath, Google, and FIRMS will be employed. UIPath is a cloud platform for Robotic Process Automation (RPA) and an open-source RPA tool. The RPA approach provides developers with a cloud-native and open-source solution to bring RPA into their organizations without the burdensome constraints of existing offerings. Google serves as a service platform that functions as an automated integration between systems and the data stored in Google Workspace. FIRMS is a website used by NASA to monitor fire points on Earth. The data is collected mainly from the Southeast Asian region, particularly Indonesia. By integrating UIPath, Google, and FIRMS, an automated alert notification system will be developed for the Gmail and WhatsApp platforms, along with the data of the fire coordinate points obtained. This system offers advantages in terms of the accuracy of the system in delineating specified areas, stability in generating information, and prioritized speed.

Keywords: Land fires, *UIPath*, *FIRMS, System*