

Detailed description of the mobile application of the APM system.

The air pollution monitoring system being built has been envisioned to have some IoT applications that align with the goal Arm has for setting up its club on the Ashesi campus.

- The mobile application must have a primary user (asthmatic patient) to log in and allow the application. The application must have access to his/her live location.
- The application must be connected to the APM device, preferably via Wi-Fi, and must take information about the air quality from the device and display it to the user.
- The user can select some contacts on his/her phone to be his/her guardian and also to get real-time information about the air quality around him/her, as well as the live location of the primary user.
- In situations where the air quality gets bad and can trigger an asthmatic attack, the application must be able to alert the user and the device. Guardians must also be alerted about the poor status of the air.
- Once the alert comes, then a pop-up menu should appear asking whether the user has gotten any asthmatic attack
- With one click, the application should be able to send a message to the guardians on any social media platform like WhatsApp, Instagram, Snapchat, etc.
- The guardian can share the live location with anyone who might be closer to the user from the application.
- When the user takes in their inhaler or the asthmatic attack goes, the user can alert the guardian with a click.
- In situations where the asthmatic attack is triggered by physical activities (i.e., running), emotional distress, or stress, the user should also let the user know with just a click on the app.
- The UI must be customizable, just like the UI of WhatsApp and Snapchat.