

## **Take Home Assessment for Position - Engineer – Software Development @ Gamuda Technologies - Lim Wei Kang**

Given more time, I would focus on expanding the dashboard's functionality and realism. Currently, the system only displays sensor readings from the past 60 minutes, so I would implement more advanced filtering options, including date/time range filters and the ability to view historical data. I would also add a feature to export reports for administrative use. To improve data responsiveness, I plan to integrate a more frequent data generation mechanism using an alternative scheduler, since Google Cloud Scheduler only supports a minimum 1-minute interval. Additionally, I would implement automated alerts for abnormal readings (e.g., high AQI or traffic levels) and track sensor health (e.g., last-seen status) to assist system administrators in monitoring and responding.