

ABSTRACT

Currently, obtaining data on the volume of vehicles entering tourist attractions is still done manually, namely by assigning several people to the field (survey site). The results of this calculation still have many weaknesses, including the level of data accuracy that is still lacking and to collect it takes a relatively long time and it is possible to manipulate data. The purpose of this research is to design an automatic vehicle volume information provider based on LoRa communication. The research method used is that researchers look for data from literature sources and from the object of research and design models from the tool. Then test it and evaluate the results of designing the model. The design process, to detect passing vehicles using the HR-S04 ultrasonic sensor, then the data is processed by Arduino UNO and sent to the Antares server. Next, the data is stored in the vehicle volume information database. This sistem knows the number of vehicles every 25 seconds to 35 seconds based on the distance obtained by the ultrasonic sensor. The results of the study have sensor accuracy value for the height and width of the miniature car, namely 91% and 92,4%. While the miniatur bus has sensor accuracy value in the high dimension of 96,03% and the sensor accuracy value in detecting width is 94,64%.

Keywords : Arduino UNO, Sensor Ultrasonic, LoRa