



Construction And Measures Of The Automated Shelter System



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~Abstract~

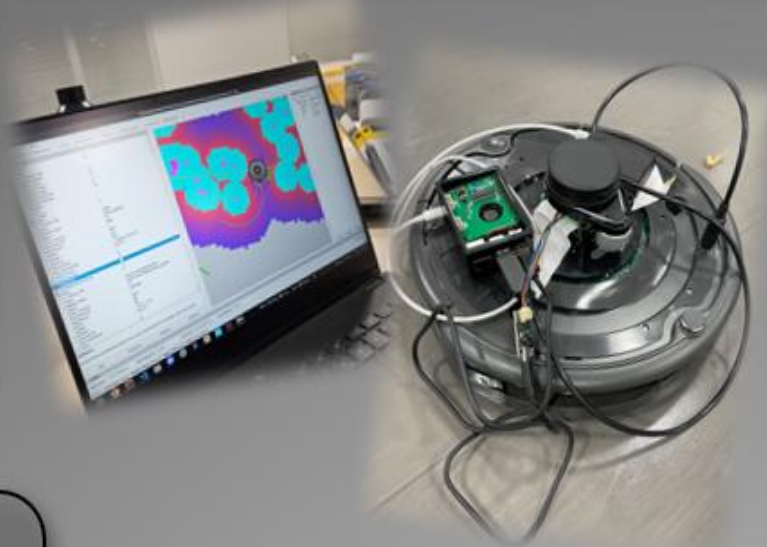
Our goal is to safely deliver supplies to the affected areas and victims. To achieve this we have create an automated driving system and by using cleaning robots we aim to reduce manpower, thereby reducing costs and improving safety.

~Introduction~

In recent years, it has been reported that the number of volunteers in Japan who provide direct support to disaster-stricken areas and disaster victims has been on the decline. On the other hand, there are cases in which volunteers cause inconvenience to disaster victims and affected areas. Specifically, "the roads are congested by volunteers heading to the area and supplies cannot be delivered," and "food and shelter are needed for the volunteers. Based on these problems, an automated system will be built to respond immediately to the needs of disaster victims, and reduce costs by reducing the number of personnel.

~Results and Discussion~

The automated driving program has been completed and successfully put into operation, and the use of LiDAR sensor has enabled the system to recognize people and obstacles.



~Materials and Methods~

- Creating an automated driving program
- Running programs using Raspberry Pi 5
- Spatial recognition and location information using LiDAR sensor

~Conclusion~

As a result, the automated driving program was completed and the robot was successfully put into operation. At this point, we are still in the middle of the process and there are things that can be improved, so we would like to build an even more advanced and precise automated driving system.

~References~

1. <https://www.rohm.co.jp/electronics-basics/laser-diodes/>
2. <https://www.vieureka.com/blog/blog-1900/>

