Abstract

This graduation project aims to develop a low-cost Dog Robot that utilizes robotics technology to provide it to a wide range of users. The project seeks to address the growing demand for innovative solutions in various fields that can benefit from the use of robotics.

The suggested method is centered on creating and building a low-cost Service Dog Robot with superior sensing capabilities, mobility, and interactive features. The robot, which is equipped with sensors, can sense and understand its surroundings, allowing it to move, plan pathways, avoid obstacles, and execute activities suited to the user's individual demands. The Service Dog Robot supports with daily tasks such as object retrieval and delivery. Its versatility and learning skills enable it to tailor its help to the changing demands of individual users, making it a versatile and long-lasting solution.

To ensure accessibility and usability, the project prioritizes the selection of cost-effective components that do not compromise performance. Additionally, the utilization of open-source resources facilitates knowledge-sharing and collaboration within the robotics community.

This project aims to develop a low-cost robot that to a wide range of users in different settings. By focusing on affordability and ease of use, this initiative hopes to make robotics technology more accessible and encourage collaboration across different fields. The deployment of this technology will benefit both users and researchers in the robotics industry and drive further advancements in the sector.

The goal of this graduation project is to create a low-cost, highly capable service dog robot that can benefit a wide range of users. The team aims to develop a robot with superior sensing, mobility, and interactive features, empowering it to autonomously navigate, plan routes, avoid obstacles, and execute tasks tailored to individual user needs.

To ensure accessibility, the team will select cost-effective components without compromising performance, and utilize open-source resources to facilitate knowledge-sharing and collaboration within the robotics community. By prioritizing affordability and user-friendliness, the project aspires to make robotics technology more accessible, stimulate further advancements, and encourage interdisciplinary cooperation.