

LISA ROBOT:

A Logistics Indoor Service Assistant Robot for Hospital Applications



THE PROBLEM

Healthcare facilities in the Philippines continue to struggle in delivering patient care effectively due to the growing shortage of healthcare workers, and it has been exacerbated by COVID-19 pandemic. The distribution and management of patient care activities and hospital logistics have both been considerably impacted by the growing scarcity of the workforce. Estimates from 2022 show that the ideal nurse-to-patient ratio is 1:12. The Philippine Daily Inquirer published an editorial article which revealed that in reality, the majority of Filipino nurses care for 20 to 50 patients during a 12-hour shift. The quality of patient care will likely worsen if an excessive nurse-to-patient ratio continues, in addition to a steady rise in the turnover rate of nurses. The demand for technology support has grown due to the increased time and energy demands placed on healthcare personnel.



THE SOLUTION

The LISA Robot (Logistics Indoor Service Assistant Robot) is an autonomous service robot designed to improve operational efficiency in healthcare environments by automating routine logistics tasks. Equipped with advanced navigation systems, LISA can autonomously deliver medical supplies, transport equipment, and assist with disinfection and sterilization procedures within hospitals. Its telepresence functionality allows healthcare professionals to remotely conduct patient checkups and rounds, reducing the risk of infection transmission. The LISA Robot enhances resource allocation, enabling healthcare workers to focus more on patient care, thereby addressing staffing shortages and improving overall hospital service delivery. LISA Robot offers autonomous navigation, telepresence function, and logistics and task automation, with customizable and adaptable design, affordability, localized after-sales support. In a market dominated by foreign-made robots, the LISA Robot stands out for its local origin, allowing it to better cater to the specific needs and challenges faced by Filipino businesses. It allows the consumer to customize the robot to meet unique requirements, may it be for hospitals, hotels, or other service-oriented organizations.

TECHNOLOGY GENERATOR

University of Santo Tomas
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TECHNOLOGY DEVELOPMENT

The LISA Robot is currently at Technology Readiness Level 7, meaning it has been demonstrated in an operational environment.

The intellectual property for the LISA Robot is patent-pending. LISA Robot is already at Investment Readiness Level (IRL) 8. The entry-level selling price of the LISA Robot is \$2,745.87, or approximately ₱158,847.00, making it significantly more affordable compared to its local and foreign competitors.

The research team is actively seeking partnerships with manufacturers and distributors who can enhance automation in service sectors.

Interested technology adopters may send a letter of intent addressed to:



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