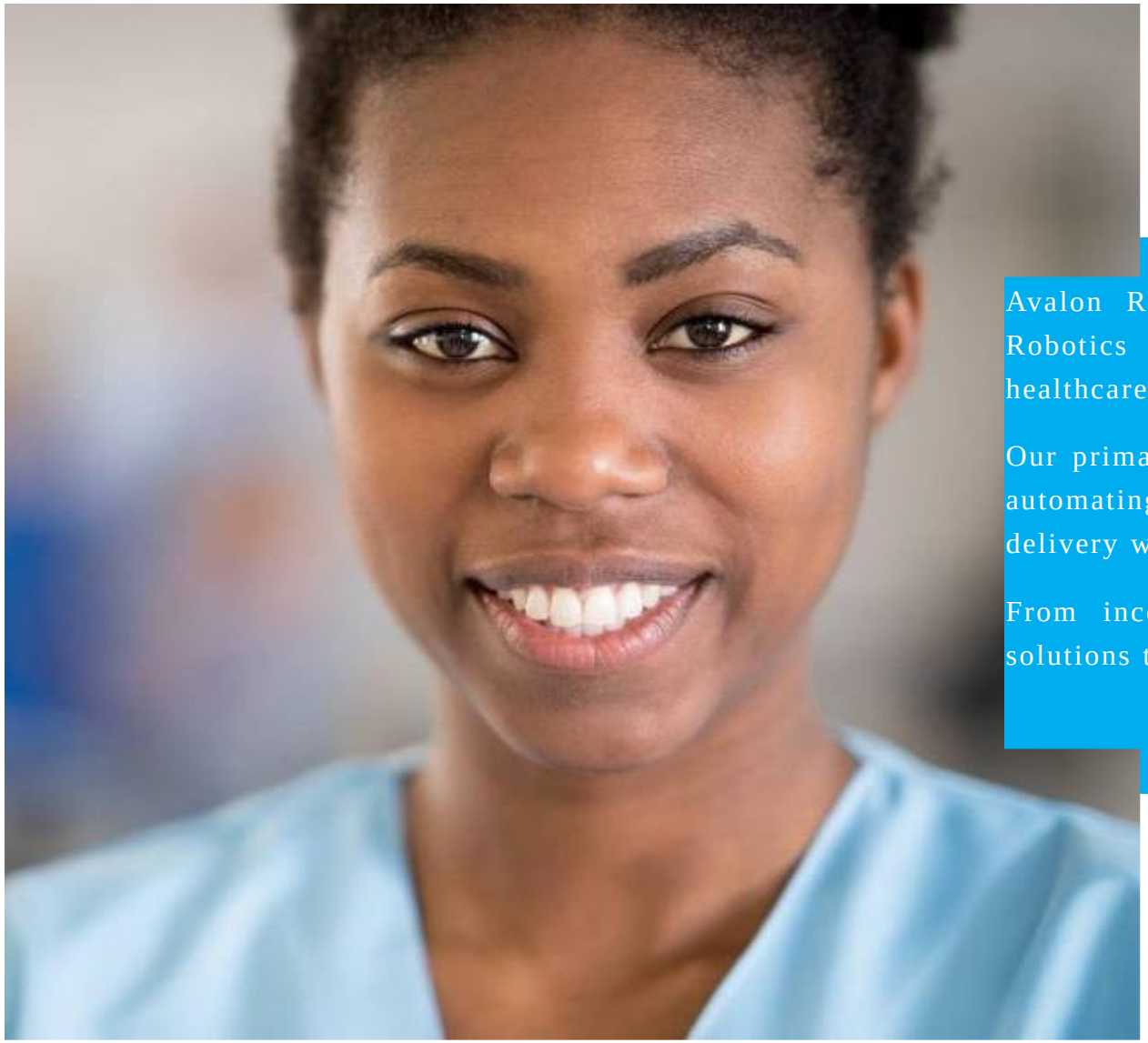
AVALON ROBOTICS

EMPOWERING TEAMS WITH ASSISTIVE ROBOTIC SYSTEMS

Working Visit of our Partner At the National Robots Industrial Centre in Wuhu, China. July 2023

ABOUT US



Avalon Robotics Inc. is a leading provider of premium Assistive Service Robotics systems, specializing in advanced service robots tailored for the healthcare and hospitality industries.

Our primary focus is on reducing burnout and improving clinical outcomes by automating routine tasks, optimizing efficiency, and transforming service delivery within healthcare and hospitality facilities.

From inception to deployment and ongoing support, we offer end-to-end solutions to meet the unique needs of clients.

Empowering Service Delivery with AI Robotics

OUR BIG IDEA

Our mission is to enhance productivity, efficiency, and safety in healthcare facilities with cutting-edge service robotics. By redefining mundane tasks, we empower professionals and improve patient care outcomes.

Join us in shaping a future where robotics and AI drive better work satisfaction in healthcare and hospitality.

PROBLEMS

- Studies indicate nurses and health care front line staff spend significant percent of work hours on repetitive non core tasks [1,2]
- Long-distance walks and non clinical activities contribute to staff burnout and reduced job satisfaction.
- Staff attrition is often linked to the physical and workload demands inherent in the profession [1,2].

[1] Ohneberg, C., Stöbich, N., Warmbein, A. et al. Assistive robotic systems in nursing care: a scoping review. BMC Nurs 22, 72 (2023). ***https://doi.org/10.1186/s12912-023-01230-y***

[2] Hendrich A, Chow MP, Skierczynski BA, Lu Z. A 36-hospital time and motion study: how do medical-surgical nurses spend their time? Perm J. 2008;12:25–34. ***https://doi.org/10.7812/tpp/08-021***

THE PROPOSED TECHNOLOGY: ASSISTIVE ROBOTIC SYSTEMS

Nurses and frontline workers are the primary hospital caregivers. Increasing the efficiency and effectiveness of nursing care is essential to hospital function and the delivery of safe patient care.

- Avalon Robotics Assistive Service Robots, like Leo, provide an innovative solution for healthcare challenges.
- These advanced robots autonomously handle medical item delivery and repetitive tasks, reducing non-patient activity time.
- Collaborating with frontline health care workers, out robot optimize workflow efficiency, enabling more focus on patient care.
- Time saved from walking translates into increased direct patient-care activities.
- Implementing Assistive Service Robots in healthcare settings can revolutionize service delivery, enhance job satisfaction for clinical staff, and improve patient outcomes.

PRODUCT HIGHLIGHT

TESTED

Our robots are the result of extensive research and development and are currently operational in various hospitals.

UNIQUE

Dedicated autonomous and intelligent service robots designed specifically for the healthcare industry.

STABLE AND ROBUST

Attains a remarkable 99.9% accuracy in obstacle avoidance and delivery accuracy.

AUTHENTIC

Developed in collaboration with medical experts to incorporate their valuable input and expertise.

PRODUCT CATEGORIES

ITEM DELIVERY ROBOTS FOR HEALTHCARE FACILITIES

An intelligent service robot designed to automate medicals, lab item deliveries within healthcare, senior home facilities.

FLOOR CLEANING ROBOTS FOR HEALTHCARE FACILITIES, SENIOR HOME, DENTAL OFFICES

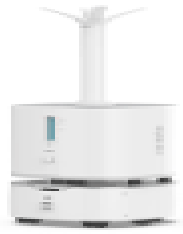
Our cleaning AI robots are fully unmanned, offering 100% automated cleaning that minimizes labor costs.

DISINFECTANT ROBOT FOR HEALTHCARE FACILITIES

Intelligent autonomous disinfection robot equipped with UV lamp and dry fog technology for efficient sanitization.

ROBOTS FOR CART AND MATERIAL TRANSPORTATION

Featuring a lift function and a dedicated rack locking mechanism, our cart robots ensure the cart remains securely attached during high-speed movements, guaranteeing reliability and stability.



Intelligent Disinfection Robot

Hospital Delivery Robot

Commercial Floor Washing Robot

Intelligent Reception Robot

HOSPITAL DELIVERY ROBOT (LEO) THE NURSE ASSISTANT ROBOT

Leo, The Versatile, Secure And Efficient Delivery Robot, Excels In Multi-point Delivery Of Medications, Lab Items, Meals, Specimens, And Other Essentials In Healthcare Facilities, Dental Offices, Senior Homes And More.

Security and Authentication Technology

Leo is equipped with robust security and authentication system to prevent unauthorized personnel from accidentally removing or misplacing materials from the robot cabin.

Smart Dispatching Management Systems

Our software management system allows for the efficient dispatch of Leo to multiple wards in a single run, streamlining operations and enhancing overall management.

UV System – No Contamination

Leo comes with an integrated ultraviolet lamp that enables both manual and automatic disinfection of the cabin.

FLOOR CLEANING ROBOT (MILO) – JANITOR ASSISTANT

Milo, The Fully Unmanned Cleaning Robot, Provides 100% Automated Cleaning, Reducing Labor Costs Effectively.

Multi-terminal, Convenient and Intelligent Management System

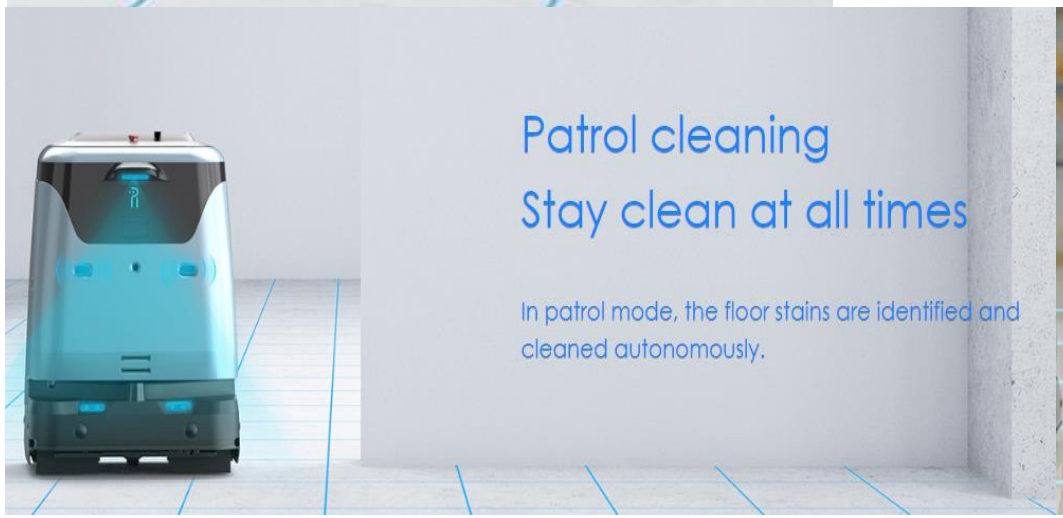
Cleaning tasks can be assigned to Milo through an app, operation screen, and web page. It supports remote monitoring, real-time data upload, and generates comprehensive reports for efficient cleaning operations.

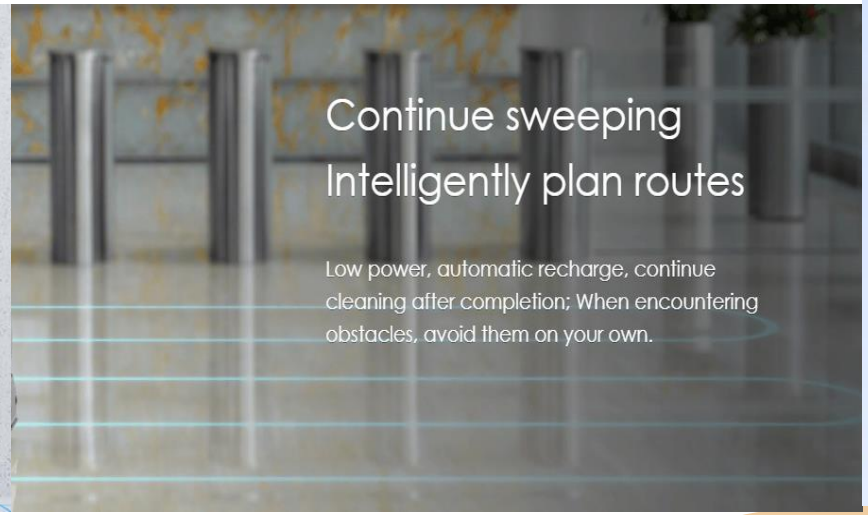
Obstacle Avoidance System

Milo employs intelligent navigation technology for efficient and swift delivery, ensuring obstacle avoidance and smooth

Small Turning Radius

With its rear drive design and small turning radius, Milo offers high cleaning efficiency, enabling it to effectively clean smaller areas with ease.





DISINFECTANT ROBOT (MIA)

Mia, The Unmanned Disinfectant Robot, Ensures Enhanced Safety And Cost Efficiency By Eliminating The Need For Manual Labor.

Top Performer

MIA, recognized as a top-performing disinfection robot, was selected among the best 15 artificial intelligence classic cases of 2021 by e-Net Research Institute and Deben Consulting, out of a total of 100 contenders.

Mia, with its robust disinfection process, provides double disinfection and guarantees sterilization. Mia can be deployed 24/7, tirelessly working around the clock.

Mia features 4 sets of 8-channel UV-C LED UV lamps that require no preheating. With just 39 seconds of operation, Mia achieves a remarkable 99.99% bacteria killing rate. Each UV lamp group delivers an impressive UV intensity of up to 260μW/cm².

Eco – Friendly Technology

MIA utilizes UV-C LED ultraviolet sterilization, ensuring an eco-friendly solution without mercury. Its sterilization process is highly efficient, delivering effective results.

3D High-accuracy obstacle avoidance

Autonomous navigation

Multi-robot collaboration

Autonomous path planning

- Autonomous movement for dynamic disinfection
- UV+ultra-dry atomized spray for disinfection
- Precise remote control
- 3D intelligent obstacle avoidance

INTELLIGENT RECEPTION ROBOT (WONDERGUIDE)

Wonderguide Series, Our Fully Autonomous Reception Solution, Enhances Customer And Patience Experience, Frees Up Staff To Focus On What Matters.

Introducing Wonderguide

Series of greeting robots, specifically designed for immersive service introductions. These robots cruise along customizable routes, offering multilingual service introductions. Their applications range from routine visitations to hospitalized and special needs children at children's wards, bringing joy and uplifting spirits, to singing happy birthday songs and celebrating special occasions

Natural Language Technology

Your go-to information inquiry companion. Equipped with an easy-to-chat natural language system, Wonderguide understands guest queries effortlessly. With access to over 10 million pieces of Q&A information when programmed, it can provide answers to ticket-related inquiries and offer details about various topics.

Colorful Smart Screen

Experience vibrant visuals on the 18.5-inch large screen, offering a range of advertising methods including engaging videos and captivating pictures to light up the spirit.

- Cruising for service introduction
- Promotion and display
- Self-assisted elevator taking

- Way leading
- Communication and inquiry
- Automatic recharging

INTELLIGENT HEALTH MANAGEMENT ROBOT (MEDIHELPER)

Introducing Medihelper, The Intelligent Health Management Robot Designed To Provide Companionship And Assistance To Seniors And Patients In Healthcare Settings.

Companion and support

Medihelper serves as a reliable companion for seniors in senior homes and patient rooms, providing emotional support and companionship when human staffing is limited .

Smart Assistance

Medihelper intelligently performs various tasks, assisting with daily activities, medication reminders, and providing relevant information and resources to promote a healthier lifestyle.

Enhanced care and well-being

By deploying Medihelper, seniors and patients receive enhanced care and support, leading to improved well-being, increased engagement, and a higher quality of life.

Remote consultation

- Look, listen, question and feel the pulse
- Remote consultation
- Health big data

Chronic disease management

- Smart medicine box
- Medicine taking reminder
- Drug management

Accompanying & Guardianship

- Chat with the elderly
- Guardianship of the elderly
- Remote video
- Itinerary reminder

INTELLIGENT MOBILITY CARE ROBOT (SMARTWHEELS)

Introducing Smartwheels, Your Intelligent Mobility Companion, Offering Automated Experience For Enhanced Mobility.

INTELLIGENT CART/MATERIAL ROBOT (OLIVER)

Oliver, Our Fully Autonomous Material Delivery Solution, Enhances Safety, Streamlines Material Transportation, And Significantly Reduces Labor Costs.

Oliver enables medical and nursing staff to safely and efficiently transport materials such as carts and bulk items, reducing labor intensity. With 24/7 operation, Oliver ensures reliable and seamless material transport.

Safety Technology

In terms of safety, Oliver is equipped with advanced visual perception capabilities, enabling clear identification of objects and facilitating effective collaboration between humans and machines. With its 360° obstacle avoidance system, Oliver ensures a safe navigation in complex environments.

Moreover, Oliver holds EU CE-MD certification, meeting stringent safety standards.

Flexibility and Scalable

With its optimal size and payload capacity, Oliver is perfectly suited for cart, piece-picking and case-picking workflows in healthcare facilities. It is designed to enhance productivity, increase throughput capacity, and achieve labor savings.

COST SAVINGS: LEO, THE CLINICAL ASSISTIVE ROBOT

Avalon Robotics Cost Impact:

Imagine a bustling hospital in Canada with front staff working diligently to provide top-notch services to patients and visitors. However, some tasks like handling deliveries, guiding guests, and repetitive jobs can consume their time and energy. To optimize efficiency and elevate the level of personalized care, the hospital decides to invest in LEO, an advanced Assistive Service Robot.

LEO, the cutting-edge delivery assistant, seamlessly integrates into the hospital's daily operations. With its ability to respond to commands, takes elevator, deliver items, and provide essential information, LEO becomes an invaluable asset to the front staff team.

Let's explore the potential cost-saving benefits of introducing LEO:

Hourly rate of front staff: 25 CAD
Estimated Cost of LEO robot: 98,000 CAD
Hours of operation per day: 8 hours
Days of operation per year: 365 days

By automating tasks that were previously carried out by front staff, LEO streamlines operations and allows them to focus on more meaningful and human-centered tasks, thereby enhancing the overall guest experience.

Calculation:

Daily Savings per LEO robot:
Daily Savings = 8 hours * 25 CAD/hour
Daily Savings = 200 CAD

Annual Savings per LEO robot:
Annual Savings = Daily Savings * 365
Annual Savings = 200 CAD/day * 365 days
Annual Savings = 73,000 CAD

Return on Investment (ROI):
ROI = (Annual Savings / Cost of LEO Robot) * 100
ROI = (73,000 CAD / 98,000 CAD) * 100
ROI = 74.49%

In this scenario, the hospital can potentially save approximately 73,000 CAD annually by utilizing LEO for tasks like deliveries, guiding guests, and other repetitive duties. Additionally, the impressive ROI of 74.49% highlights the economic value and efficiency gains achieved through the implementation of the LEO robot.

With LEO's assistance, the hospital successfully optimizes resource allocation, improves staff job satisfaction, and elevates the quality of care provided to patients and visitors.

The smart investment in LEO not only enhances productivity but also establishes a more welcoming and humanized environment within the hospital premises.

OUR SERVICES

Requirement Gathering

Collaborating with you, we identify your unique vision and needs, providing comprehensive support in selecting, implementing, and leveraging AI AMR robotics to achieve your goals effectively.

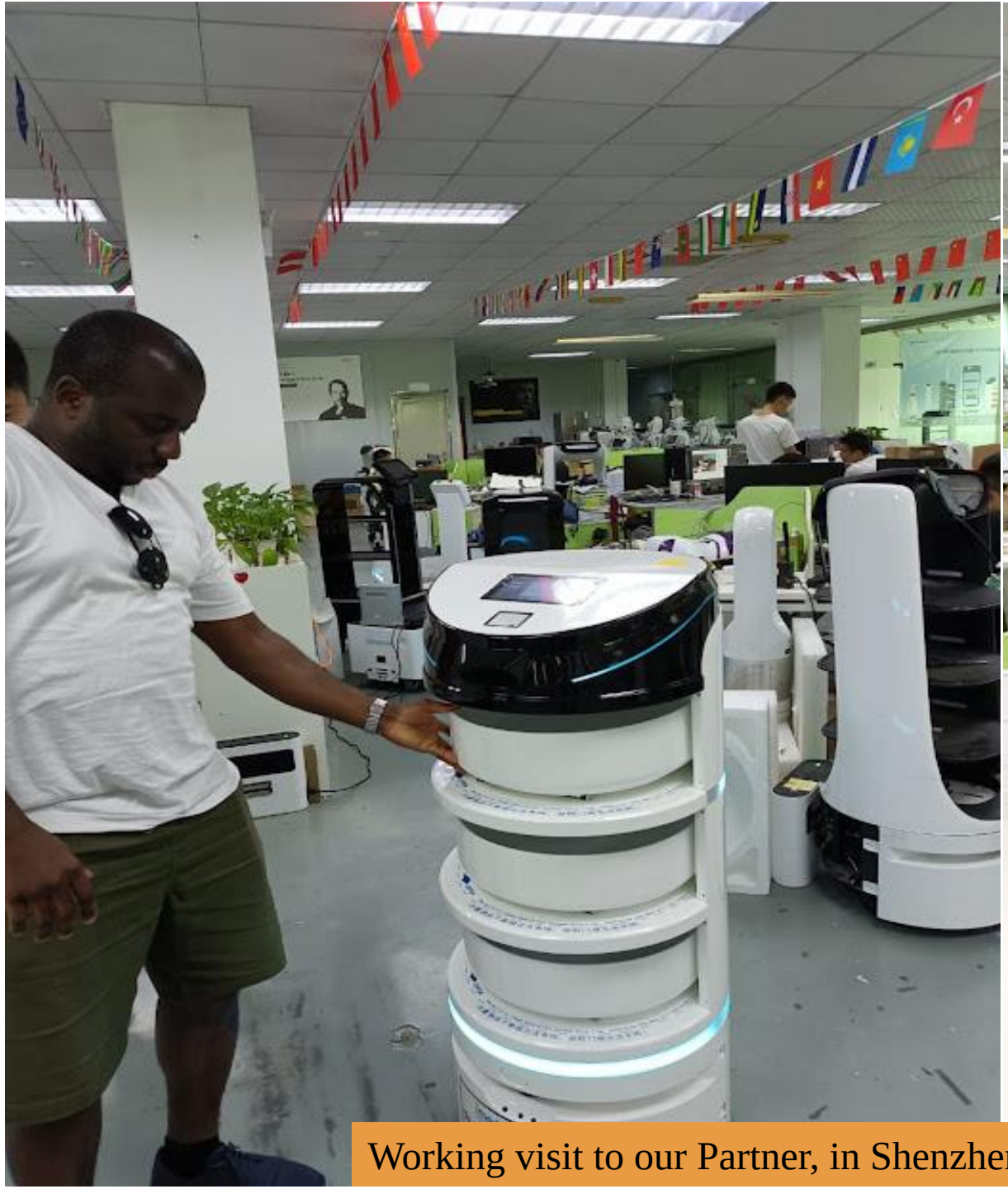
Implementation

We specialize in supply and implementing AMR solutions tailored to your specific needs, ensuring a seamless integration of robotic technology in your operations.

Dedicated Support

We provide dedicated support throughout the entire process, from pre-deployment to post-deployment, ensuring that you maximize the value of your technology investment.

Working visit to our Tech Partner, Robint, in Beijing China, July 2023



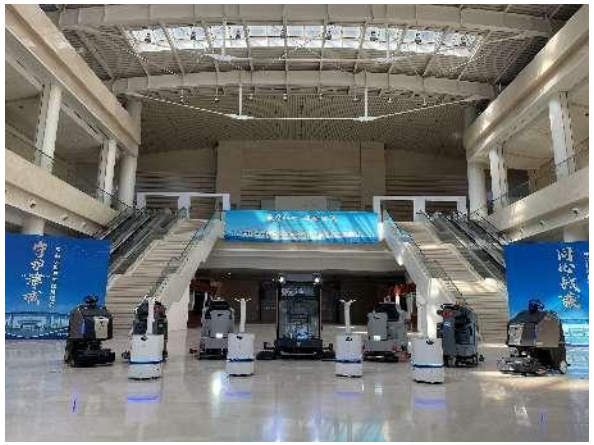
Working visit to our Partner, in Shenzhen, China, July 2023

Cross Section of OEM Robots in Beijing, China. July 2023

Application Case – Leo at work

Hospital Cooperation Cases——500 hospitals

Peking University Third Hospital



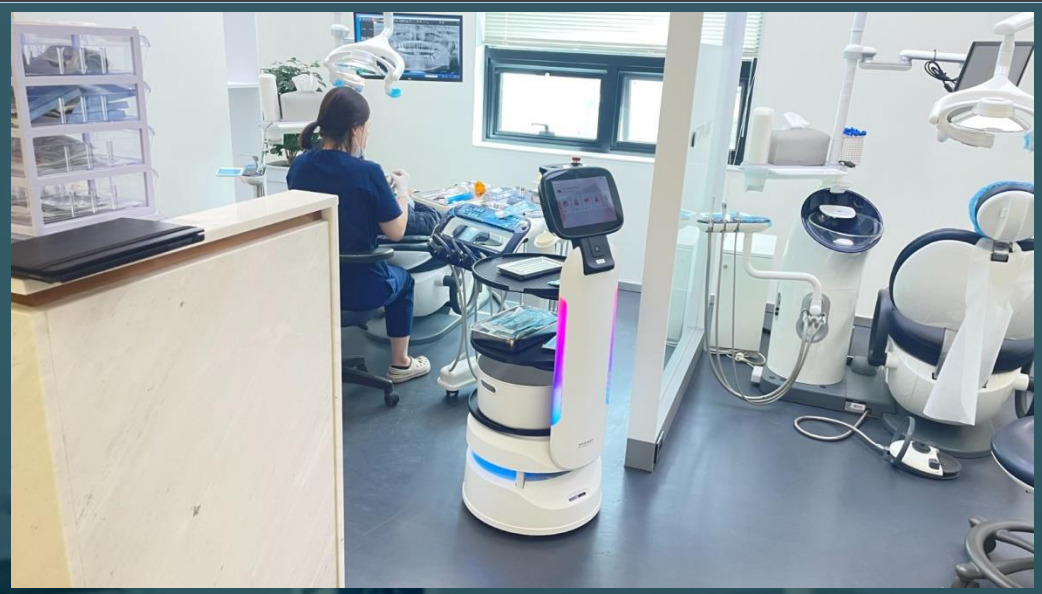
mobile cabin hospitals

SHANGHAI FIRST
MATERNITY AND INFANT HOSPITAL

BEIJING HAIDIAN Hospital

Changchun Obstetrics-
Gynecology Hospital

GUANGDONG PROVINCIAL
PEOPLE'SHOSPITAL



FOR MORE INQUIRIES

Norbert Obi
Principal

info@avalonrobotics.ca

709-740-0913