



# BellaBot Pro

Premium Delivery & Advertising Robot





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# BellaBot Pro

## Premium Delivery & Advertising Robot

BellaBot Pro, a premium indoor delivery and advertising solution, embodies the original BellaBot's charming cat-themed persona, offering multimodal interaction, ample payload capacity, and swappable battery technology.

Enhancing these core features, it features a large advertising screen for boosted promotional capabilities. We've refined visual tray detection for greater accuracy and expanded dish recognition capabilities. Moreover, ambient tray lighting ensures clear guidance during meal pickup. With added front-view cameras, it enhances environmental awareness and enables interactive greetings. Supported by VSLAM + Lidar SLAM visual positioning, it's well-suited for large-scale deployments.





# Key Features



Superior Mobility



Customized Advertisement



Upgraded VSLAM+



Omni-Sense Safety



Dish Recognition & Broadcast



Smart Tray Detection



Crosswalk Caution



Multiple Delivery Modes



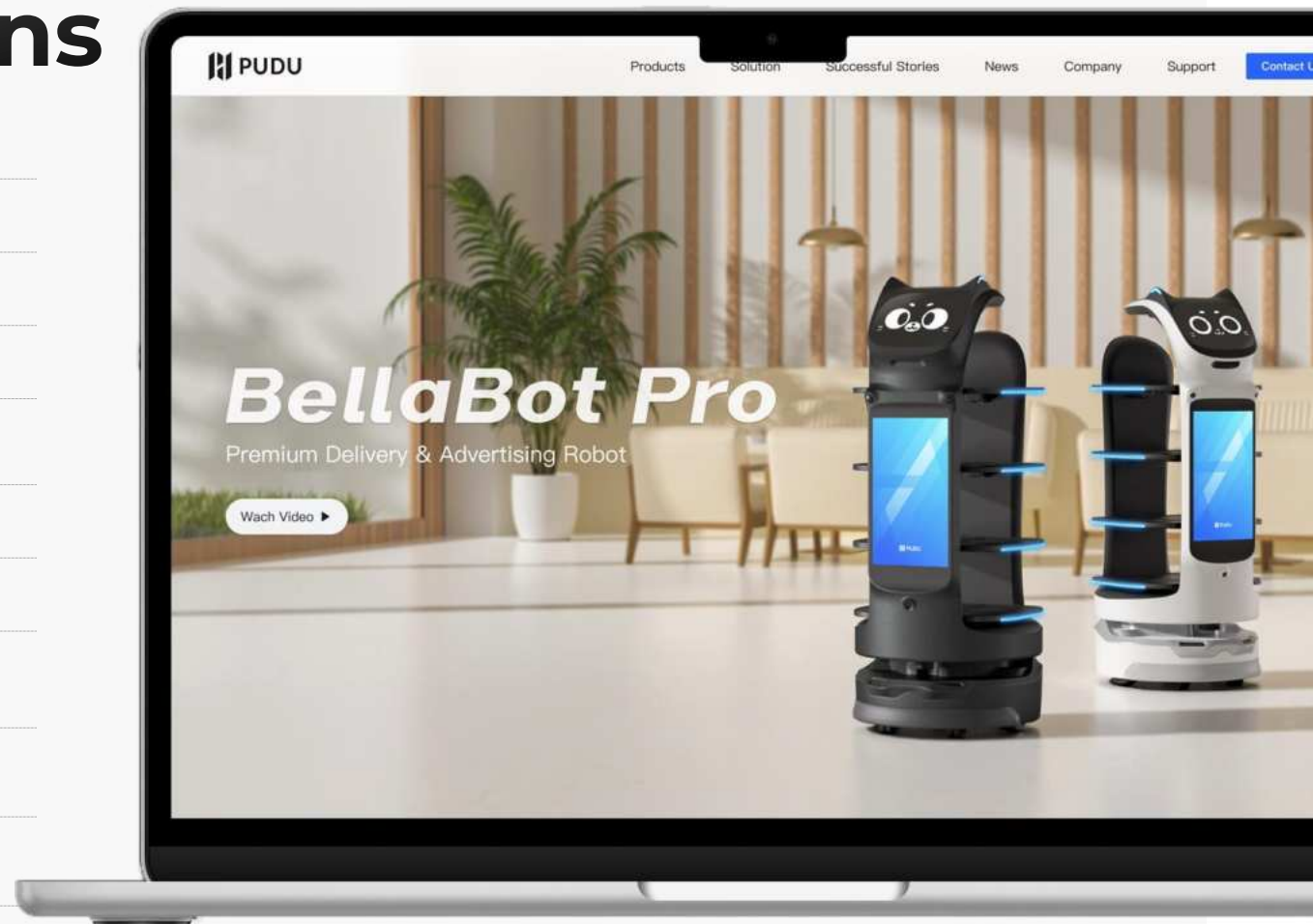
# Product Introduction





# Product Specifications

Machine Dimension	57×55×129cm
Machine Weight	55KG
Loading Capacity	40kg (10kg/tray)
Tray Dimension	410mm×500mm
Battery Capacity	25.6Ah
Cruise Speed	0.2-1.2m/s
Charging Time	4.5h
Screen	10.1-inch LCD screen and 18.5-inch LCD screen
Path Clearance	≥65cm
Navigation Methods	VSLAM & Lidar SLAM





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# VSLAM+ for Rapid Deployment Across Vast Venues

## Precision Meets Presence

- Marker-less deployment, reducing **75%** deployment time
- Comfortable operation even in high ceiling environment up to **30 meters**
- Extra large scene mapping for up to **200,000m<sup>2</sup>**
- Improved stability with fewer changes of the positioning reference
- Greater adaptability of different scenarios under different light conditions







# In-store Marketing



## Reach More Customers with 18.5" Large Ad Display

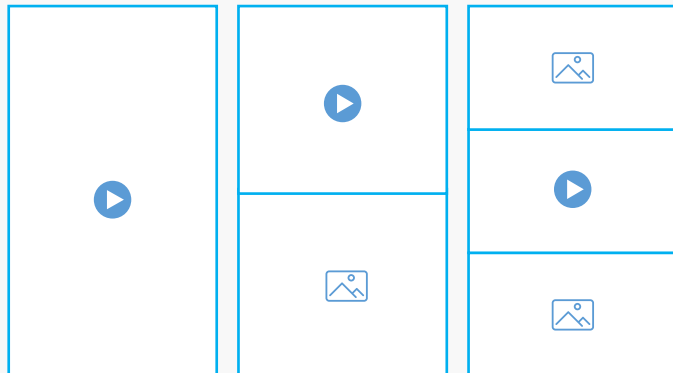
- The 18.5" large ad screen can display promotional videos or pictures, providing a more **eye-catching approach** to marketing.
- Centered ad display perfectly adapts to the customer's angle of view, while maintaining the design aesthetic of the robot.
- BellaBot Pro is not only attractive to adults but also to children, making it ideal to impress the whole family.



# In-store Marketing

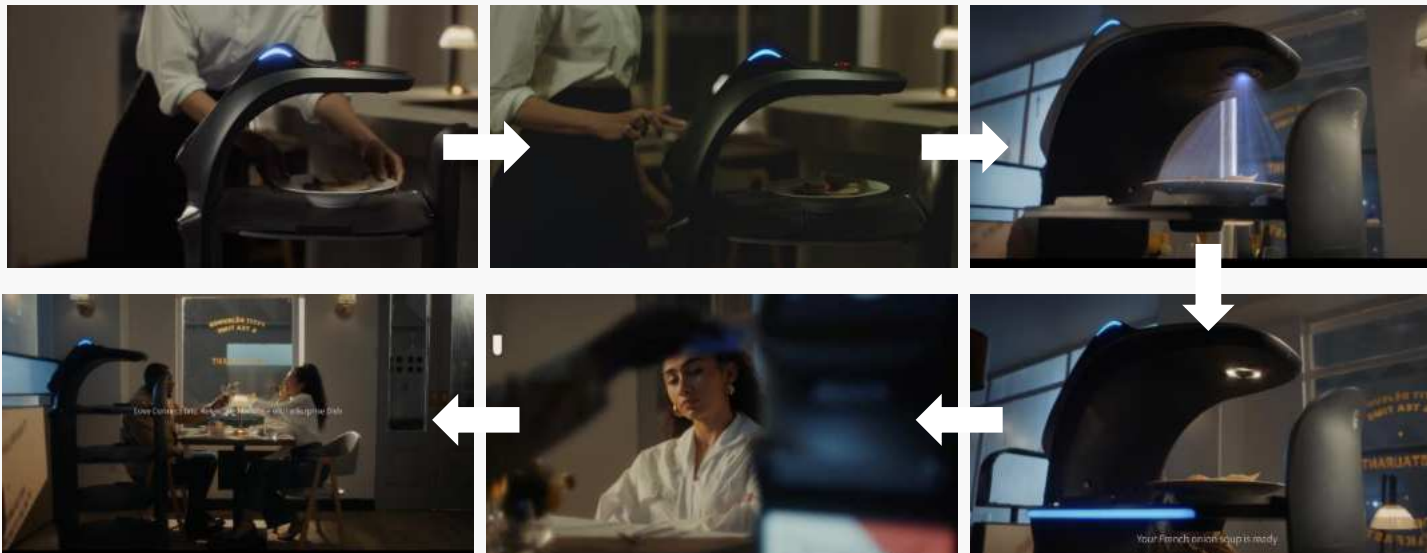
## Customized Advertisement

- PUDU Business Management Platform offers the flexibility to customize the content presented on the ad display.
- The ad playlist can be easily generated, with customer-defined frequency and the sequence of the ads.





# A Whole New Level of Meal Pick-up



Placing dishes onto the tray->

**BellaBot Pro recognizes dishes ->**

BellaBot Pro departs ->

Arrives at destination ->

**Lights up to remind for meal pickup ->**

**Announces dish information ->**

Customer retrieves meal ->

**Tray detects that dishes are taken ->**

BellaBot Pro continues to next task



# Smart Trays Detection & Dish Recognition

## Seamless Delivery with Smart Tray Detection

- Fish-eye cameras automatically detect tray content, optimizing the entire self-service dining experience.

## Dish Recognition & Broadcast\*

- The integration of dish recognition technology empowers BellaBot Pro to not only **announce dish names** but also provide **valuable insights such as cooking methods and ways of eating**, enriching diners' experiences with enhanced information.



\*: In July 2024, upgraded via OTA.



# Effortless Maneuvering in Tighter Spaces

With a minimized clearance at 65 cm, BellaBot Pro is specially designed for complex and dynamic environments.



- Delivering the smoothest mobility capability within the same size as large delivery robots, it effortlessly navigates complex environments.
- Improved mobility in tight spaces enhances the robot's efficiency and performance, making it more adaptable to diverse environments and suitable for versatile applications.
- With a clearance of 65cm, it navigates seamlessly through various types of passages, including straight, L-shaped, S-shaped, and pivot turns.



# Enhanced Multimodal Interaction



**Greeting Interaction**

**Ear-touch Interaction**



**Back-touch Interaction**



**Light Interaction**

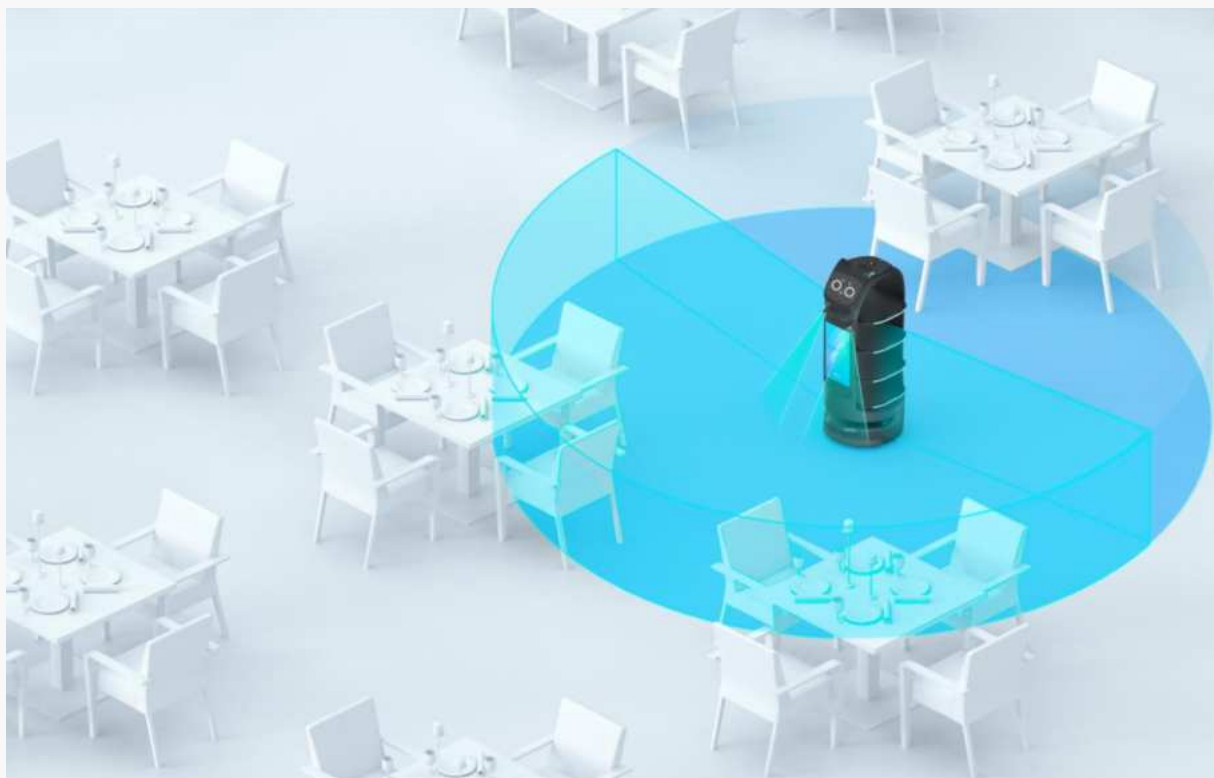


**Voice Interaction**





# Omni-Sense Safety

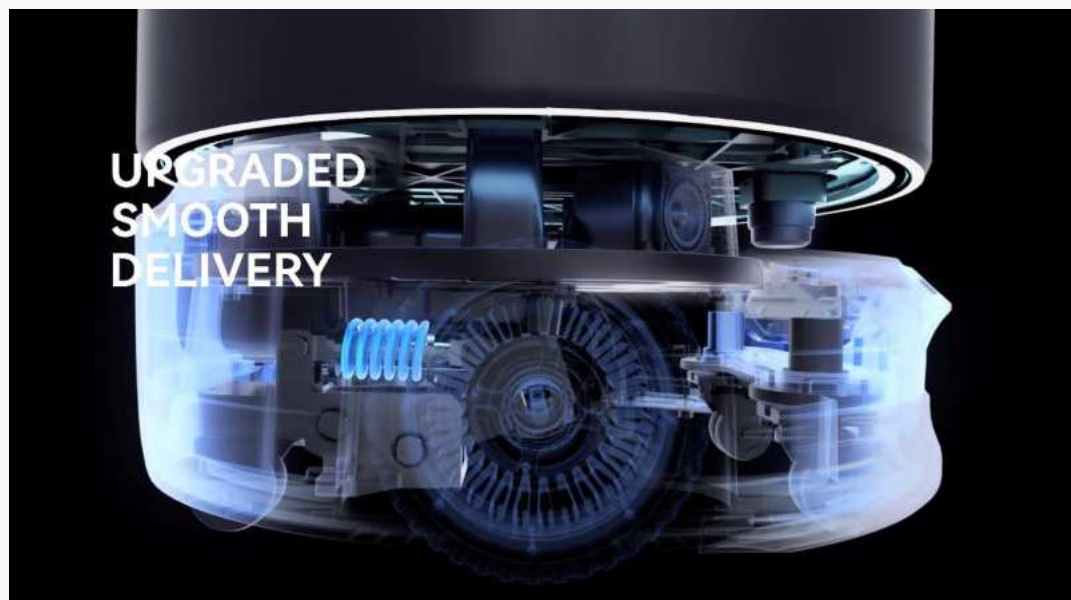


## Obstacles Detected, Journey Perfected

- A revolutionary environmental perception solution, equipped with **2 front-view cameras, 3 RGBD sensors, and 1 lidar**, achieves full coverage of front-end chassis detection. It automatically halts upon encountering obstacles and navigates with ease while steering forward.
- The addition of two front-view cameras ensures **comprehensive detection coverage** at the front end of the robot, enhancing safety in complex environments.
- This **reduces the likelihood of accidents**, improves user experience, enhances brand image, and increases consumer trust.



# Stabilized Delivery



## Upgraded for Stability, Ready for Any Scene

- The newly **upgraded vehicle-grade chassis** and motion control algorithms **enhance delivery stability**, making it suitable for delivering various items in diverse scenarios.
- Enhanced with **shock-absorbing technology**, our upgraded automobile-level adaptive suspension significantly improves the stability of BellaBot Pro, allowing it to transport dishes with food decorations, porridge, soups, and drinks while minimizing spills.





# Crosswalk Caution

## Projecting Safety at Every Turn

- BellaBot Pro possesses autonomous safety awareness, projecting ground patterns near intersections to alert pedestrians, ensuring **blind spot safety**.
- For stores: Minimize the risk of blind spot accidents caused by obstructed walls, thereby reducing potential compensation and repair costs. This also enhances brand image and increases consumer trust.
- For customers: Ground projection lights serve as alerts for pedestrians, signaling the presence of approaching robots and enhancing their safety awareness.





# Multiple Work Modes

## Multi-Modal Delivery

- One robot serves for multiple purposes



Delivery Mode



Cruise Mode



Direct Mode



Dish Return Mode



Birthday Mode

## Multi-Table Delivery

- Serve several tables at one go

Meet the diversified delivery needs



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## Multi-Industry, Multi-Scenario Coverage



Restaurant & Café



Hospital & Clinic



Hotel & Resort



Office



Senior Living



Manufacture



Entertainment & Leisure



Retail



# Customer Value



A differentiated experience to attract more customers

BellaBot Pro redefines customer experience with an eye-catching way to attract customers and a smart, thoughtful way to serve them.

A novel approach for in-store marketing

BellaBot Pro allows your marketing campaigns and special offers to reach more customers, delivering a higher conversion.





# Customer Value

## Robot-human collaboration to improve service and efficiency

Human workers collaborate with BellaBot Pro in a way that they can both do what they are best at.

BellaBot Pro is ready to assist and improve humankind's working experience.



## Manpower shortage is no longer a problem

Multiple delivery mode can well assist stores in completing tasks such as food delivery , and delivering snacks, which will free up human workers from dull and duplicate tasks.



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# Pudu Robotics

Pudu Robotics, a global leader in the service robotics sector, is dedicated to enhancing human productivity and living standards through innovative robot technology.

With a focus on R&D, manufacturing, and sales of service robots, Pudu Robotics holds nearly a thousand authorized patents worldwide, encompassing a wide range of core technologies. The company's robots have been widely adopted in various industries, including dining, retail, hospitality, healthcare, entertainment, education and manufacturing. To date, Pudu Robotics has successfully shipped nearly 80,000 units to a variety of markets, with a presence in more than 60 countries and regions worldwide.



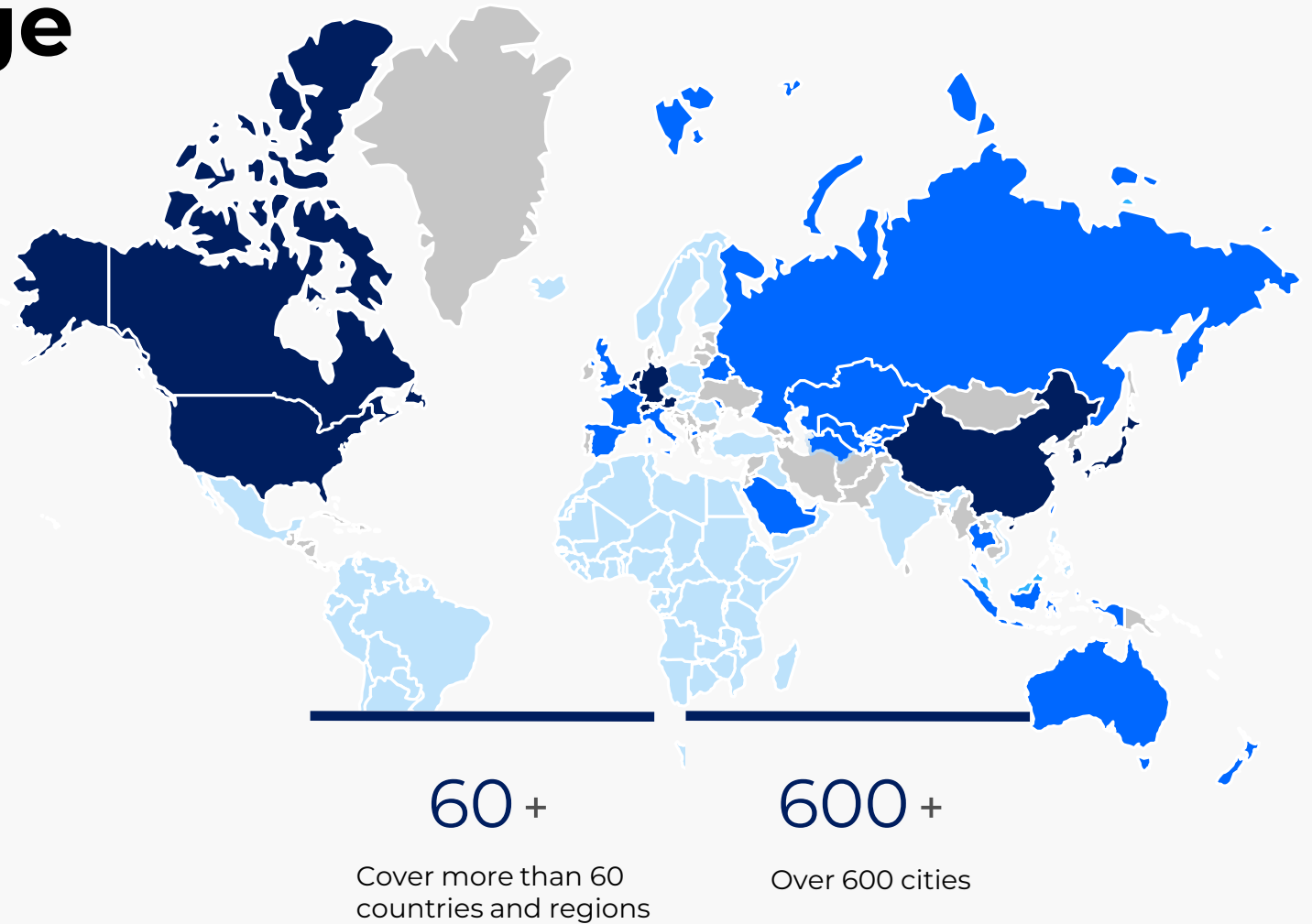




# Scale Advantage

## Globalization

Pudu Robotics has established a business presence in North America, Europe, East Asia, Asia-Pacific, the Middle East and Latin America. The products have been exported to more than 60 countries and regions around the world, covering more than 600\* cities worldwide. Pudu Robotics has established a trustworthy international brand image and become one of the representative enterprises of China's "intelligent" manufacturing abroad.



\* Relevant statistics as of Jan. 2024



# Cooperation

80% The market share of Top 100 restaurant clients      40,000+ Deployed Store



Catering Partners



Non-Catering Partners



Software and Hardware Partners



# Media Coverage

**Robot waiter helps ease staff shortages in busy Northland restaurant**

Darcey Power - 14:32, Jan 14, 2022



Vikas Sharma, owner of Green's Thai Cuisine in Pahiia, explains how the BellaBot is used in the restaurant to take pressure off busy staff.

Wait staff run off their feet this summer due to worker shortages are getting an extra hand of the non-human kind.

A robotic waiter, BellaBot, is helping by delivering meals from the kitchen to tables, then running dirty dishes back to the kitchen.

At Pahiia restaurant Green's Thai Cuisine, the BellaBot means wait staff can spend an average of 11 to 12 minutes longer at each table, owner Vikas Sharma said.

**MailOnline Science & Tech**

This added an extra strain on the already short waiting staff, according to owners Paolo Hu and Peter Wu, who said the BellaBots had already proved popular with diners.

The guide price for the friendly-faced robots is \$20,000 (£14,500), which is less than the cost of employing a waiter at minimum wage for 40 hours per week.

Quirky footage shows Bella, who features a wide-eyed feline face, sweeping across the restaurant floor dishing out delicacies to delighted customers.

**Restaurant forced to use robot waiters to tackle staff shortages**

Watch the full video



**CGTN**

Could robots fill the UK's service industry staff shortages?

Robot waiters could be a solution to the UK's service industry staff shortages, says a new report.

AP Pudu Robotics' New Atra CI Cleaning CES 2022

Pudu Robotics, the global leader in commercial service robots, has introduced its next product generation with its new Atra CI cleaning robot, which made its global debut at the start of CES 2022. The first commercial appearance of the CI series Pudu Behaviour official entry into the commercial cleaning robot market, is a work to explore applications of digital technology in regular and non-regular services.



**RESTAURANTS + BARS**


**Madison Heights restaurant uses a robot to deliver food to tables**

Melody Baetens  
The Detroit News

Published 12:51 p.m. ET Aug. 16, 2021 | Updated 9:28 a.m. ET Aug. 16, 2021

A Chinese noodle restaurant in Madison Heights may be the first in the area to employ the BellaBot, a robotic cart with a digital cartoon cat face that rolls food from the kitchen to the customers' tables.

Noodle Topia on John R is known for its house-made, hand-pulled noodle dishes, dumplings and Chinese tea drinks. The casual eatery has gained some non-human assistance in the form of BellaBot, which has four trays for carrying food (no arms) and has a precise




**ABC**

**First robot waiter in Tasmania glides into service**

On Your Afternoon with Helen Dewar


There are definitely echoes of The Jetsons as one Japanese restaurant in Hobart's The Stairs first robot waiter glides from the kitchen to each table, serving meals from a tray on its back.

Harry Jie is a software engineer who loves new technology, and when he first came across the robot waiter online (this model is called Harry), he saw it as a great compact service solution for Tasmania. Harry formed Tai Robotics, and suggested his friend Tony, who runs Kizakaya Japanese, might like to add one to his floor staff. Press play for lunch with a slice of this latest technology.







# Thank you!

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