



# KettyBot Pro

## Flexible Multitasker



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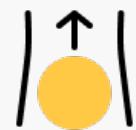


# KettyBot Pro

KettyBot Pro is the delivery-reception-marketing 3-in-1 robot that is capable of performing several tasks – delivering, guiding and promotion at the same time. As a cutting-edge product, KettyBot Pro delivers a state-of-the-art experience in different scenarios.

- Multi-task taking, a wide variety of capabilities
- A minimize clearance of 52cm (in specific situations)
- Walking AD display with 18.5" screen
- Versatile accessories, easy function-extension
- Smart trays detection for seamless delivery





Superior Mobility



Customized Advertisement



Customer Attraction



Greeting & Guiding



AI Voice Interaction



Multiple Delivery Modes



Automatic Recharging

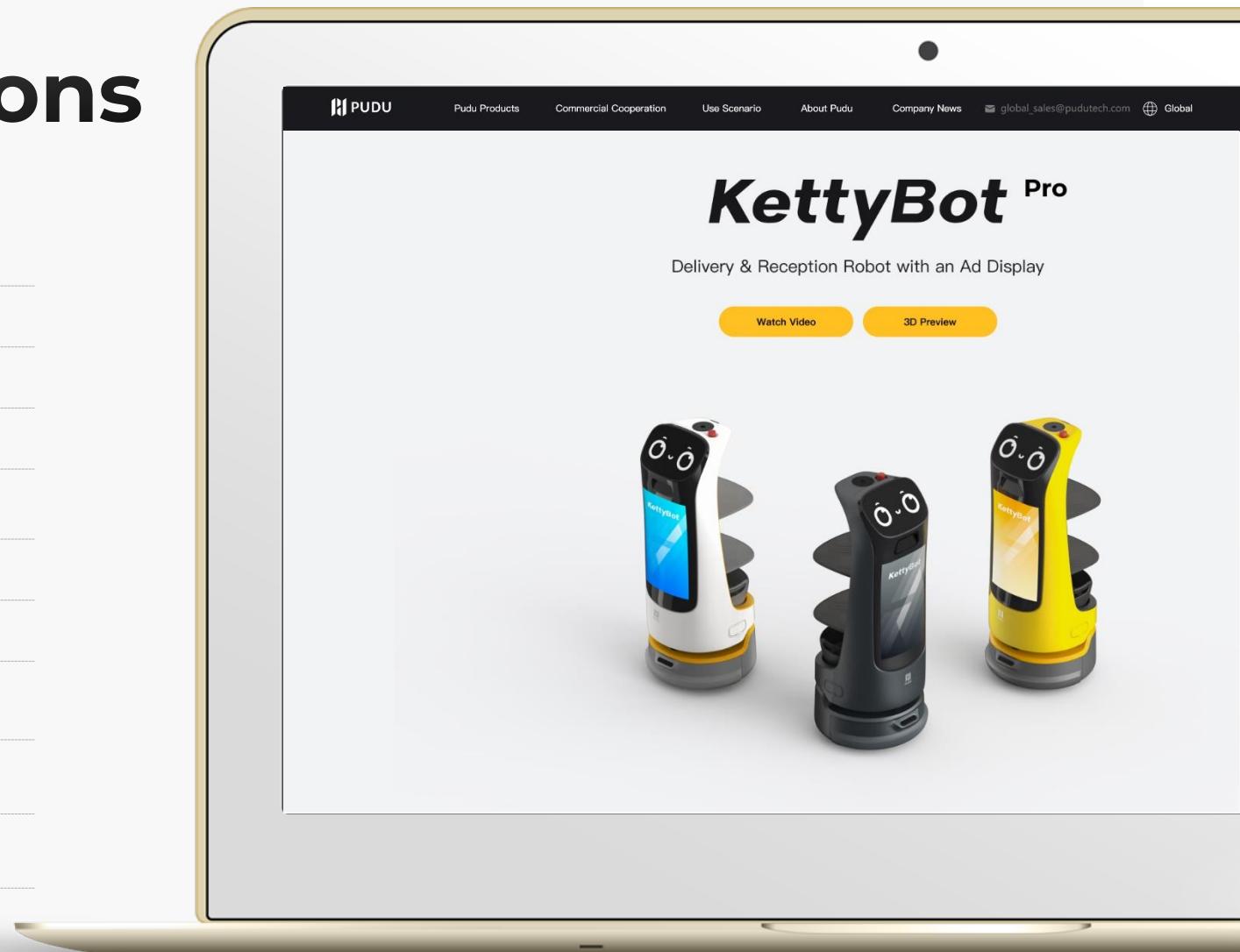


Smart Trays Detection



# Product Specifications

Machine Dimension	435*450*1120mm
Machine Weight	38KG
Loading Capacity	10KG/tray
Battery Capacity	20Ah
Run-time	9h
Cruise Speed	Max 1.2m/s
Charging Time	3.5h
Obstacle Negotiation Height	5mm
Clearance	≥52cm (in specific situations)
Climb Angle	≤5°



KettyBot Pro



## 3D Obstacle Avoidance Sensor

Two sets of RGBD cameras on the neck and the chassis form a 3D obstacle avoidance

## Visual Camera

The infrared camera on top of KettyBot Pro provides real-time V-SLAM positioning and navigation

## 18.5" Large Ad Screen

In-store marketing with a large ad display

## Smart Trays Detection

Equipped with two 360° fisheye lenses, enabling KettyBot Pro to automatically leave after the load is emptied

## Multi-functional Compartment

Two trays and a collecting box cooperate with each other to meet a variety of usage scenarios

## Laser SLAM

Laser SLAM and visual SLAM dual-SLAM solution

## The Removable Rear Cover

KettyBot Pro features two forms enabled by the removable trays and rear cover

## Independent Suspension

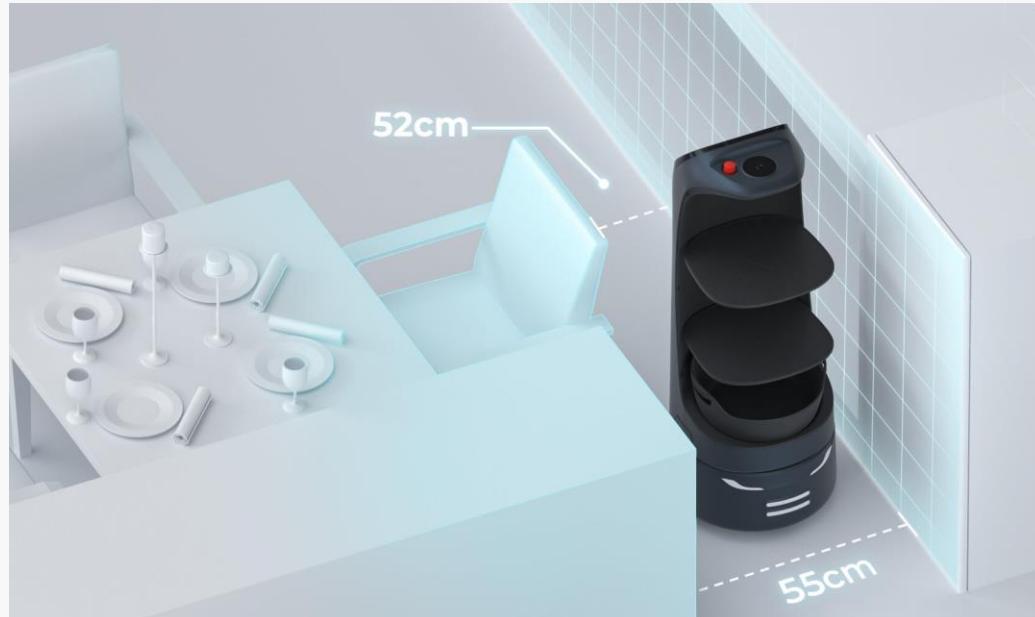
Auto-level independent linkage suspension system with high-efficiency in bump avoidance





# Product Introduction

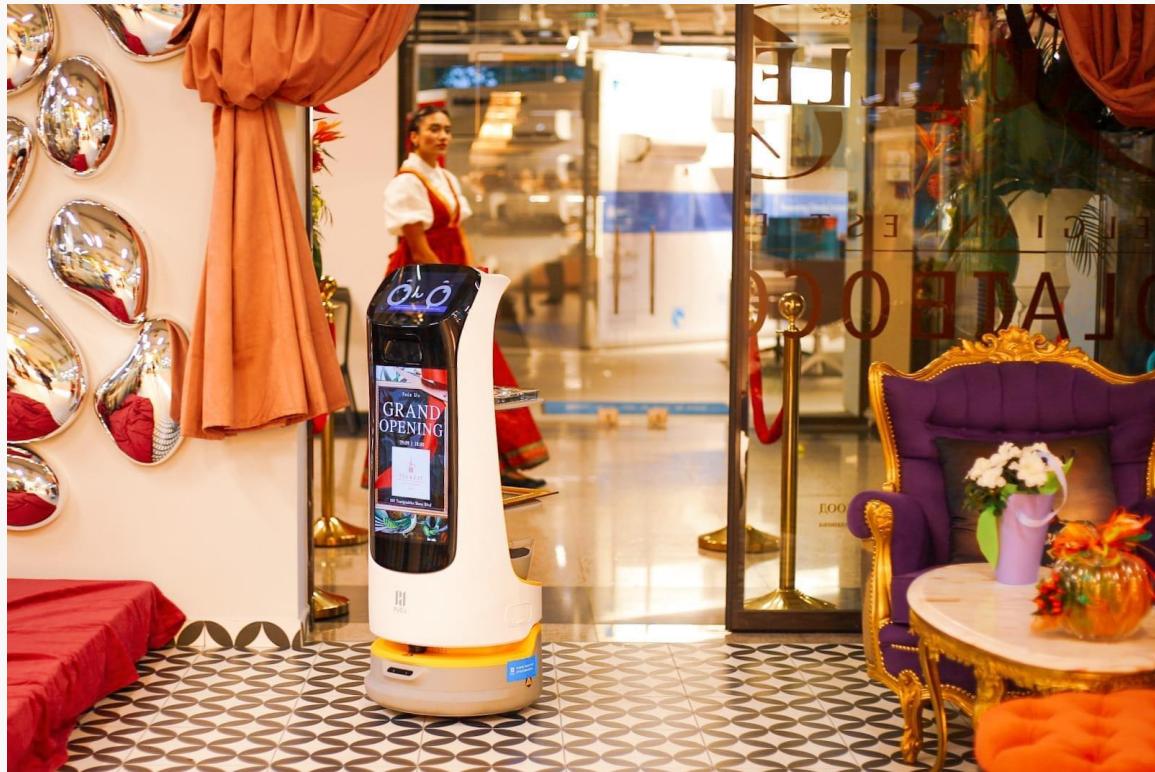
With a minimize clearance at 52 cm\*, KettyBot Pro is specially designed for complex and dynamic environments.



- Powered by PUDU advanced SLAM algorithm, KettyBot Pro supports laser and visual dual SLAM navigation and positioning.
- 2\* RGBD depth camera, With the latest enhancements to its ultra-wide-angle RGBD camera, KettyBot Pro can capture a wider field of view. This enables it to navigate complex environments more precisely and accurately, resulting in a smoother delivery experience and improved obstacle avoidance capabilities.

\* In certain situations, the robot can go through a clearance of only 52cm.

# In-store Marketing



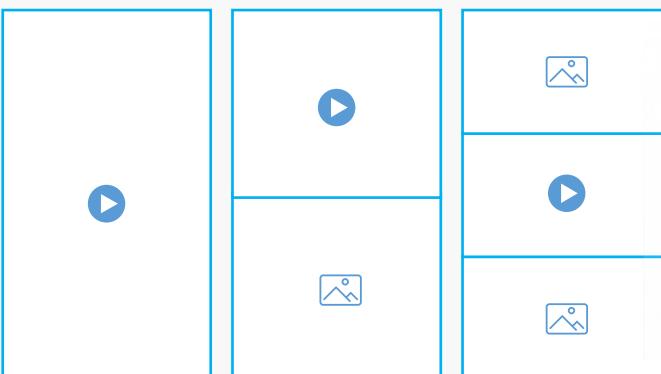
## Reach More Customers with 18.5" Large Ad Display

- The 18.5" large ad screen can display promotional video or pictures, providing a more eye-catching approach for marketing.
- Centered ad display perfectly adapts to the customer's angle of view, while maintaining the design aesthetic of the robot.
- KettyBot 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.



# Smart Trays Detection

## Seamless Delivery

- The KettyBot Pro is equipped with 360° fisheye lenses, that enable the robot to autonomously detect the status of the load.
- The KettyBot Pro can autonomously detect when the load has been completely emptied, allowing it to seamlessly move on to its next task.
- With smart trays sensing, businesses can optimize their delivery processes and improve overall customer satisfaction.



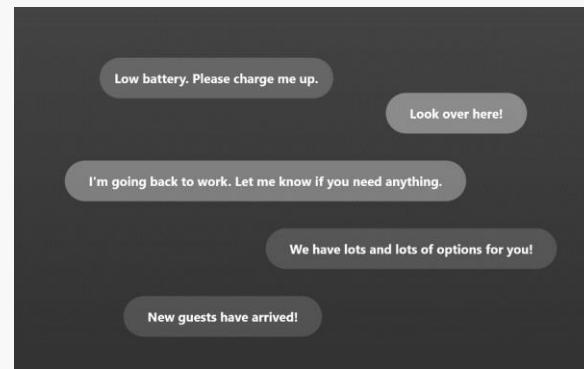
KettyBot Pro

# Diverse Human-robot Interaction

## Customer Attraction

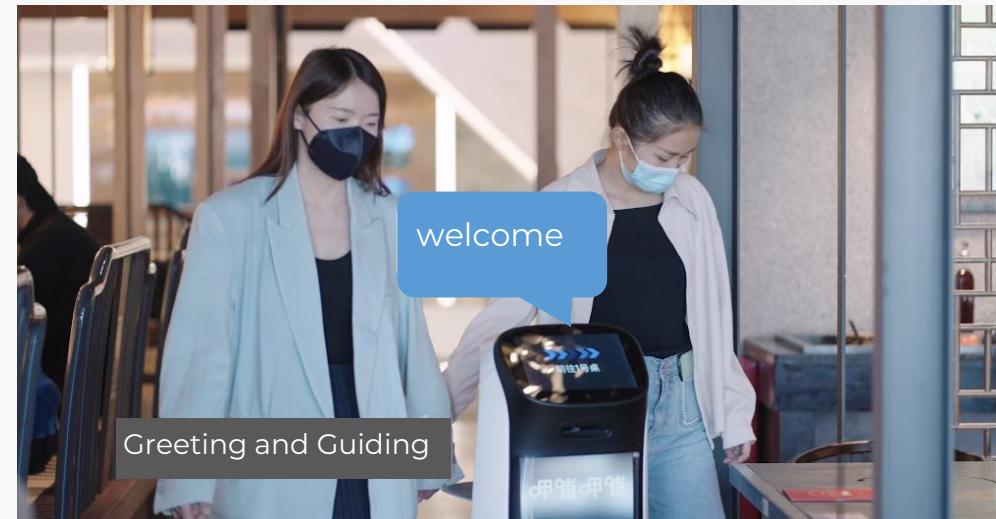
### Enhanced Voice Interaction

- The new voice interaction module integrates 360° sound localization.
- Exclusive situational dialogues with cutting-edge echo cancellation, noise suppression, and reverberation elimination technology.
- Say the word "hey pudu" to wake-up AI voice interaction
- Support a variety of human-robot dialogues

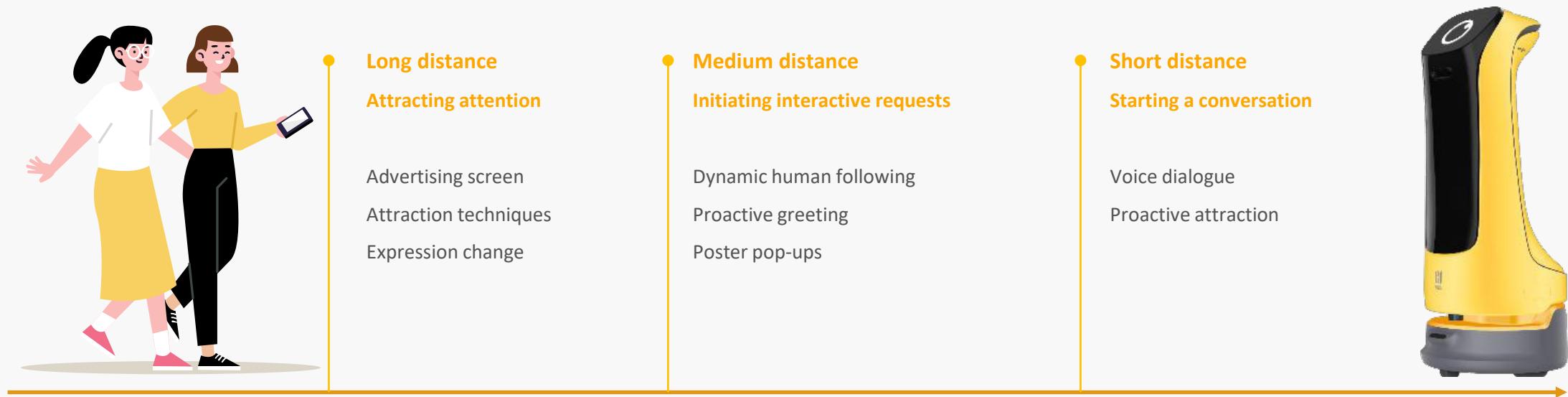


## Greeting & Guiding

- The rear cover of KettyBot Pro features a minimalist, streamlined design that makes it more compact.
- With autonomous path planning, the robot can guide customers to their tables in the optimal path, providing improved customer experience and reducing waiter workload.



# Progressive Interaction Scheme



## Long distance

KettyBot Pro draws the attention of the customers coming and going through advertising screen, body movements, broadcast words, cute expression changes and arouses the interest of customers

## Medium distance

With advertising screen, dynamic human follow, pop-up marketing posters and active greeting, KettyBot Pro further initiates interactive requests, prompting customers to walk towards the robot

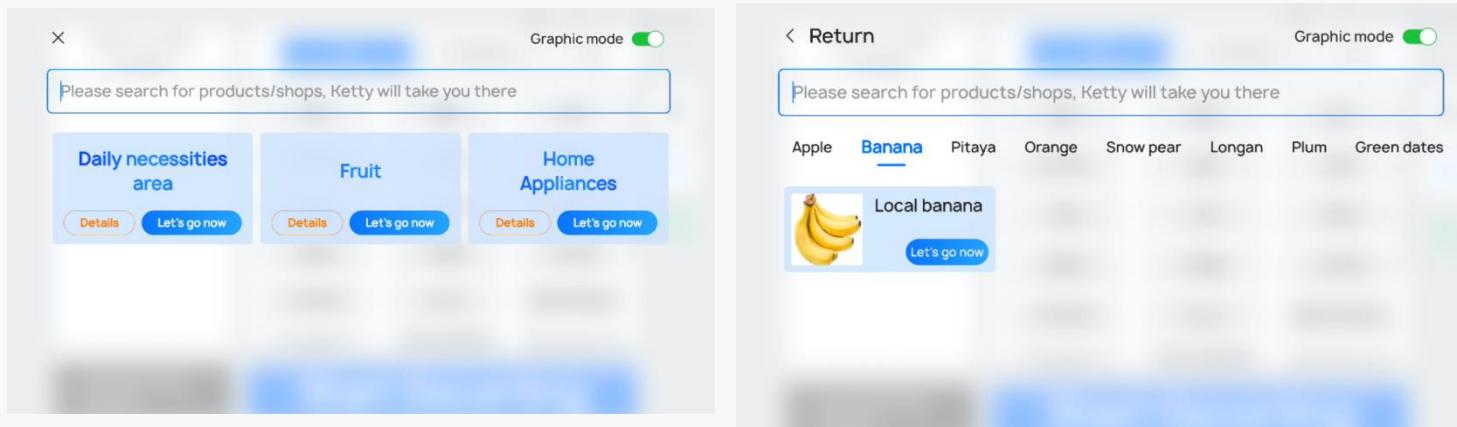
## Short distance

When customer approach to KettyBot Pro, it automatically wakes up the screen and actively conducts voice dialogues with customers and guides them into the store, improving the success rate of customers attraction and the possibility of customers entering the store



# Multiple Work Modes

## New Guiding Mode: Search & Guide

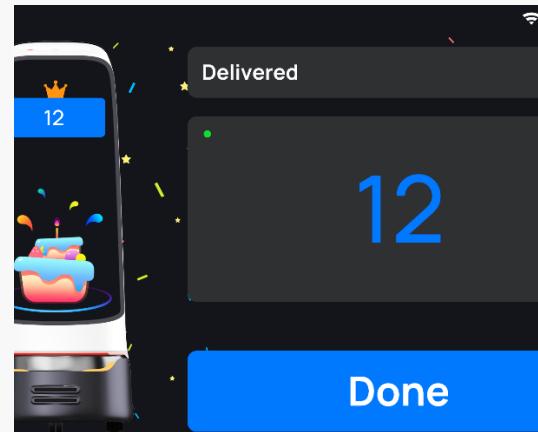


By searching words or clicking pictures, customers may look for the items or the store location they need, then KettyBot Pro will guide them to pick up point or stores.

# Multiple Work Modes

## Multi-table Delivery

Multiple tables can be served in one run with accurate positioning and optimal path planning.



## Birthday Mode

KettyBot Pro can deliver birthday cakes and sing birthday song, giving customers a strong sense of happiness and satisfaction.

## Cruise Mode

KettyBot Pro can cruise in specific areas to provide customers with free snacks, drinks and promotional flyers.

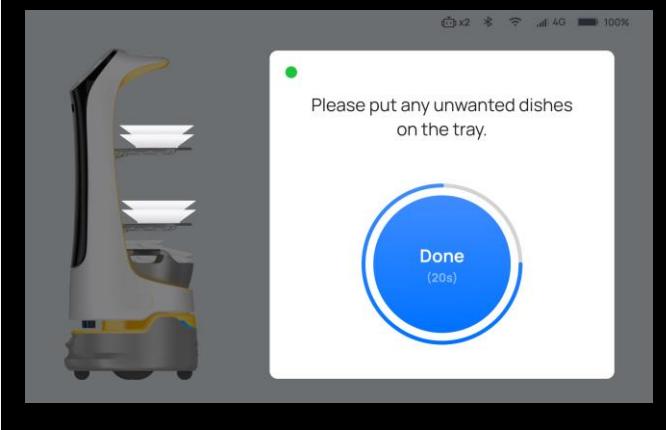




# Multiple Work Modes

## Dish Return

KettyBot Pro collects dishes from different tables and delivers them to the dish-return corner or the dish-washing room.



## Auto Return

For dining scenarios, KettyBot Pro will go to each dining table that is set to auto dish-returned, and move to the dish-return corner after completing its task.



## Air Motion

Upon arrival of the delivery, wave at the top camera to complete the delivery



## Easy Operation

## Quick Button

Upon arrival of the delivery, click on the top button of the machine to complete the delivery task



# Stabilized Delivery



- Upgraded automobile-level adaptive suspension with latest shock absorbing technology, greatly improves the stability of the robot's delivery, and supports the robot to deliver dishes with food decor, porridge, soups and drinks while reducing spills.
- KettyBot Pro can deliver more varieties of meals and beverage.

# Ultra-long battery life

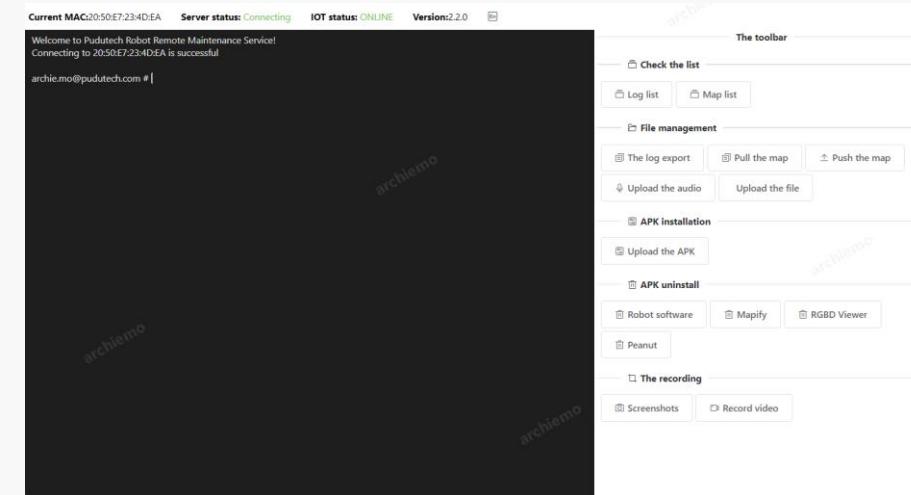
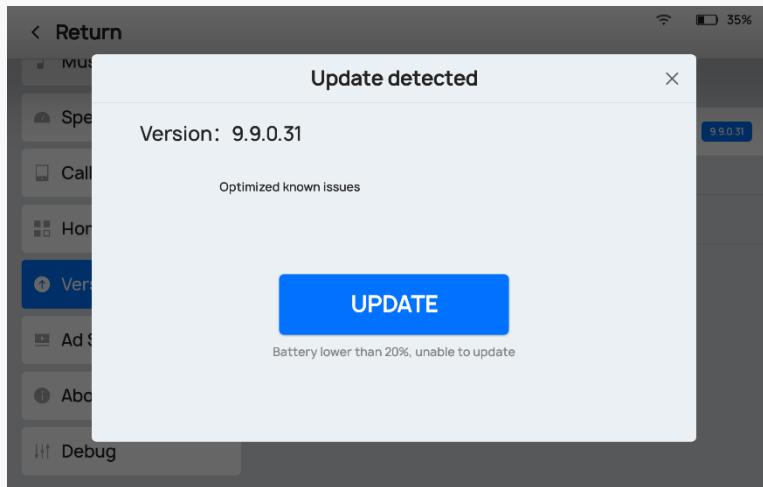
Ultra-long battery life for  
all-day-long service.

- Battery Capacity: 20Ah
- Run-time: 9H
- Automatic Recharging: KettyBot Pro automatically provides a voice alert and UI notification when the battery is low, and returns to the docking station\* simultaneously.



\*The docking station needs to be purchased additionally.

# Easy Maintenance



- Remote Upgradation Supportive, Users can quickly obtain software updates to instantly improve robots' performance.
- Intelligent Fault Analysis and Trouble-shooting, Cloud Management and Maintenance, make us can quickly respond to customer problems and solve them, and provide after-sales service remotely

Reduce maintenance time, Improve efficiency, Reduce maintenance costs



# A Versatile All-rounder

## Two Forms for Greater Versatility

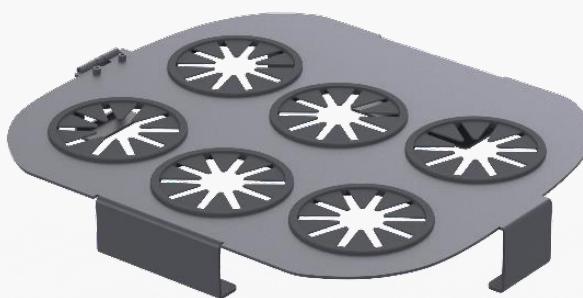
KettyBot Pro features two forms enabled by the removable trays and rear cover\*. Customers may select the form of robot based on needs.



\*The rear cover is an optional accessory.

KettyBot Pro

# Versatile Forms, Various Accessories



Fixed Cup Holder



Spill-proof Cup Holder



\*Accessories need to purchase separately



# Versatile Forms, Various Accessories



Display Stand

Protection Case

\*Accessories need to purchase separately

# Versatile Forms, Various Accessories



Charging Station



Retractable Tray Baffle



Up to 10cm extension

\*Accessories need to purchase separately

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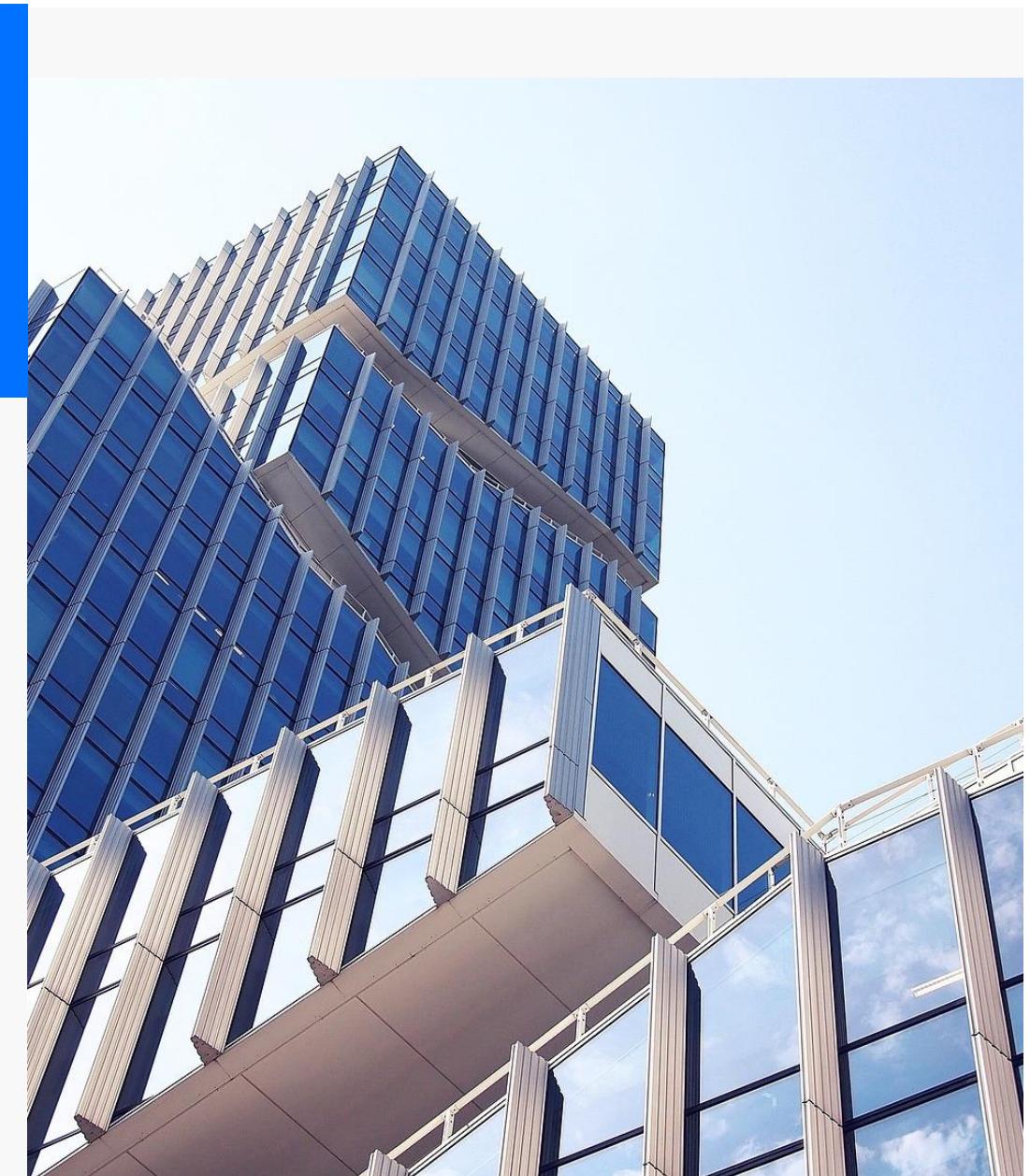
Case Study

Customer Value

# Pudu Robotics

Shenzhen-based and founded in 2016, Pudu Robotics is a world-leading tech-focused enterprise dedicated to the design, R&D, production and sales of commercial service robots on a mission to use robots to improve the efficiency of human production and living.

Since its inception, Pudu Robotics has heavily invested in R&D, obtained multiple awards such as Red Dot and applied hundreds of core patents to lead the development of the robotics category and provide high technology products that would appeal to targeted markets. Pudu Robotics has been rapidly growing in recent years to become a “leader” in the global markets with coverage of over 60 countries and regions worldwide. The robots are widely applied in restaurants, hospitals, schools, office buildings, government halls, subway stations, waiting rooms, etc.



# Global Sales Network

## Sales Network

Pudu Robotics is exploring the global markets rapidly and currently with the coverage of over 60 countries and 600 cities worldwide. We are on the way to explore and deliver more to the future!



# Media Coverage

**stuff** life & style

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

Denise Piper - 14:32, Jan 14 2022

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**

Vikas Sharma, owner of Green's Thai Cuisine in Pahia, 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 Pahia 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

Tuesday, Jan 18th 2022 2PM 18°C Air 2PM 18°C 5-Day Forecast

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

Catherine Drew in London

Share

**CGTN** Europe 02.05.19-Nov-2021

TOP NEWS

Li Keeping pledges to accelerate AI development in China-Germany ties

Robotics have been waiting in lines in London and while they're a draw for tourists, they also have potential to help the wider industry as the world recovers from the coronavirus pandemic. Behind the scenes, the UK's service industry is facing a人才 shortage. Chinese company Li Keeping is one of the first to offer help from the kitchen to the dining area, carrying meals to the correct table. It's a move that's helping to ease the pressure on staff and could be the future of food delivery.

"We've got a smaller workforce... it's just the opportunity to do it at minimum cost by having the robots in place..." Peter Weidie, operations manager at the site, said CGTN Europe.

**AP** Pudu Robotics' New Afra C1 Cleaning ... U.S. News | World News | Politics | Sports CES 2022

Pudu Robotics, the global leader in commercial service robots, has enhanced its rich product portfolio with its new Afra C1 cleaning robot, which made its global debut on day one of CES 2022. The first international appearance of Afra C1 marks Pudu Robotics' official entry into the commercial cleaning robot market, as it seeks to explore applications of digital technology in hygiene and sanitation services.

**Watch the full video**

**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. 18, 2021

**View Comments**

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 Shield**

**Share**

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

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



**MailOnline**

**TheStar**

**stuff**

**9NEWS**

**Bloomberg**

**Forbes**

**AP**

**The Detroit News**

# Cooperation

80%

The market share of Top 100 restaurant clients

40,000+ Deployed Store



m&m's

Coca-Cola



鼎泰豐



DUNKIN'



Walmart

accenture



Hilton  
Garden Inn

MediaMarkt



TOTTUS



JouéClub!  
La meilleure façon de jouer



Panasonic



Qualcomm



TEXAS  
INSTRUMENTS

Amphenol



Catering Partners

Non-Catering Partners

Software and Hardware Partners

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Customer Value



# Case Study

## Da Grasso in Poland

As famous Polish local pizza restaurant chain, originated in 1996, Da Grasso has expanded over the past 25 years and now has almost 200 outlets in 140 cities across Poland. The brand's philosophy is "Delicious pizza, family atmosphere and great service", and the brand is very open to introduce new technologies.

The brand has introduced KettyBot in selected stores since Q1 2022. The branding director said the main reasons for choosing KettyBot include KettyBot's marketing function and possibility in narrow-aisle, which allows for flexible movement and display of the restaurant's marketing activities. In addition to this, KettyBot may distribute menu and deliver food inside the restaurant. KettyBot also promotes the vibe for restaurant guests to celebrate their birthdays. After the introduction of KettyBot, the restaurant's reputation among the young customers has been significantly improved.





# Case Study

## Café De Coral in Hongkong, China

Café de Coral Group is one of Asia's largest publicly-listed restaurant and catering groups. With deep roots in Hong Kong, the Group has established its position as a market leader in the fast food industry over the past 50 years. KettyBots serve in multiple branches and they mainly function in delivering food, returning dishes and promoting.



KettyBot Pro



# Case Study





# Case Study





# Case Study





# Case Study



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# Customer Value



## A differentiated experience to attract more customers

KettyBot 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

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



KettyBot Pro



# Customer Value

## Robot-human collaboration to improve service and efficiency

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

KettyBot Pro is ready to assist and improve humankind 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.

# Customer Value



## One robot for multiple needs

As a multitasker ,KettyBot Pro can perform several tasks -- marketing, delivering, guiding at the same time, assisting from front-end to back-end, meeting the propaganda and delivery needs of restaurants, cafes, bars, barbecue shops, hotels, hospital etc.

## Unified management & IoT platform

Users can manage different models of Pudu robots simultaneously and analyze the operation of the robots through Pudu management platform.





# Thank you!

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