pudu

BellaBot

Food delivery robot

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Food delivery robot

BellaBot is the latest delivery robot product of PuduTech. It inherits the favorable features of its previous generation PuduBot, such as, the four layers large-size tray structure, **highly precise positioning and navigating capability, excellent obstacle avoidance,stable and efficient scheduling system.**

BellaBot shows breakthroughs in appearance design and humman-robot interaction as well, which make BellaBot a new type of **"cute but powerful"** delivery robot.

Pudu Robotics
Product Introduction

BellaBot

3D obstacle avoidance
3* Intel high quality RGBD vision sensors ensure safety of obstacle avoidance

All-aluminum frame
Aviation-grade aluminum alloy, stable structure

Lidar
New generation radar, efficient SLAM mapping

Visual positioning
The new visual solution, precise positioning

Sensor tray
BellaBot can sense the food been taken away and leave, realizing contactless delivery

Interactive light strip
Second generation smart lighting interaction technology, clear operating instructions

New suspension
Easily dealing with various bumps on the road, stable movement

Usage Scenarios

PuduTech has independently researched and developed **its own robot positioning and navigating technologies based on multi-sensor strategy**, BellaBot could be widely used in commercial scenarios like restaurants, hotels, nursing home and office buildings.

Restaurant

Hotel

Nursing home

Office

Karaoke

Hospital

Shopping Mall

Internet Bar

Product Feature

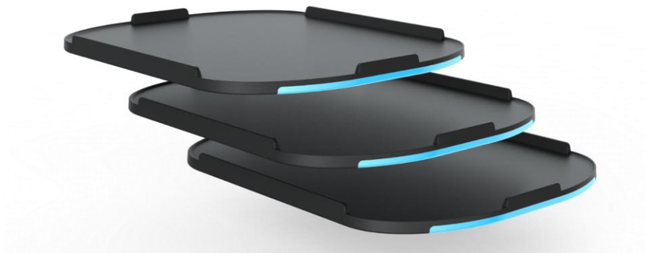
- Contactless delivery
- Delivery expert and good helper
- Extremely cute design
- Multimodal interaction
- Safe & stable delivery

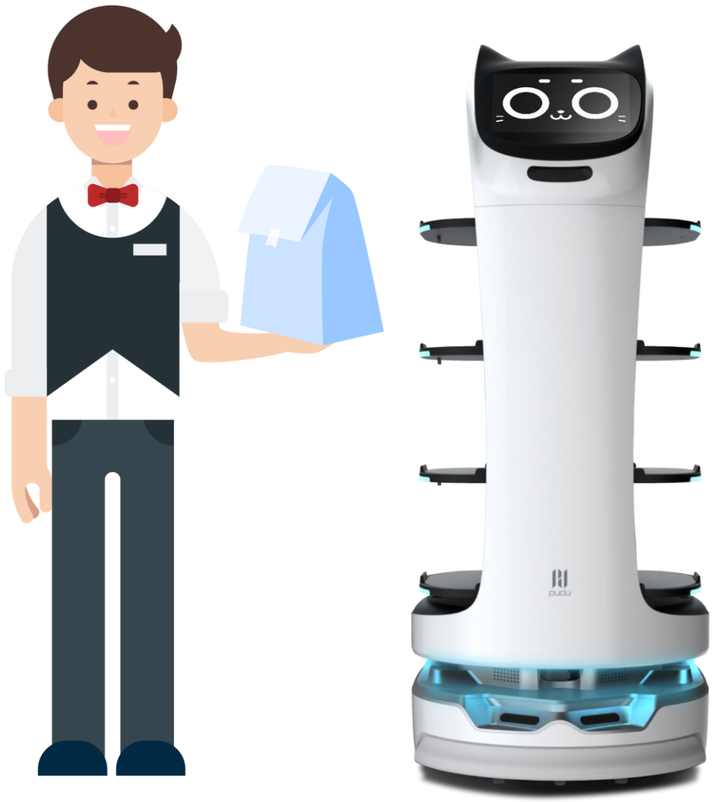
Contactless delivery

In restaurant, by using the robots to deliver food to customers, **human to human contact is reduced**, which avoids potential spreading of the virus during the outbreak of infectious disease.

Sensor tray

The tray can sense it immediately and confirm there's no dish on, th
us to promote BellaBot to automa
tically go on with the next
delivery task.





Delivery expert and good helper

BellaBot can achieve 400 times of food delivery per day, which frees waiters from repetitive work of food delivery so that they have more time to focus on serving the customers.

Extremely cute design

BellaBot takes the popular pet cat as a prototype in appearance design, and reinterprets the overall shape based on the original multi-tier large tray structure, so to make the new generation of robots seem more mild and easy-going both from visual and touching feeling.

Multimodal interaction – Don’t pick up your food wrong

Voice interaction

The intelligent AI voice system can realize full-link voice capabilities, that means you are able to **communicate with Bellabot**. Furthermore, when Bellabot takes the food to the table, she will **tell you to pick up your dishes from corresponding tray.**

Light interaction

Different task states trigger corresponding light effect interactions. When BellaBot arrives to the table with meals, **the tray with lamp belt flashing indicates to customers don’t pick up your food wrong.**

Multimodal interaction – A CAT with emotion

Touch a cute cat

BellaBot is designed with an advanced tactile feedback system, which enables the robot to **give out different responses when it is touched on the head or ears.**

(Bella in TVC is only for reference)

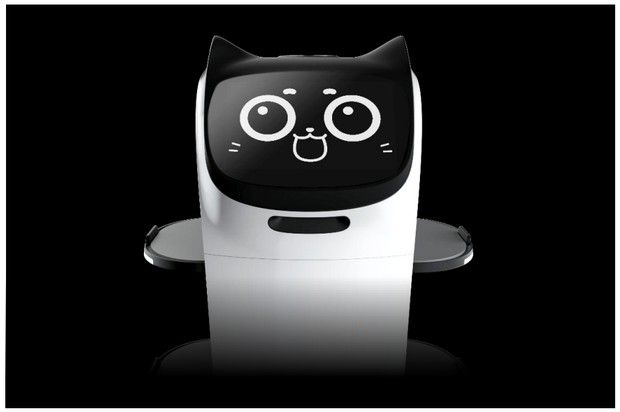
Vivid expression

The display on the head is not only the main panel for waiters to operate, but also **displays dozens of smart expressions** such as happy, sad, lazy, or angry during work, thus to let customers feel the “emotions” of the robot.

Safe & stable delivery

3D obstacle avoidance-Ensure safety

- 3* INTEL® REALSENSE™ RGBD sensors enable robot to detect obstacles precisely
- Stop immediately when confronting obstacles



Minimum height of object detection is 20cm

Obstacle detection frequency up to 5400 times per minute

Front detection angle up to 192.64°

Front obstacle detection range exceeds 10m

Safe & stable delivery

Independent interlinked suspension

BellaBot has an independent interlinked suspension which ensures that food delivered will not be damaged and liquid delivered will not splash out.

Safety certification

BellaBot can meet the requirement of certification, FCC certification and FDA certification, CR （China Robot Certification）certification, CK certification

Product specification

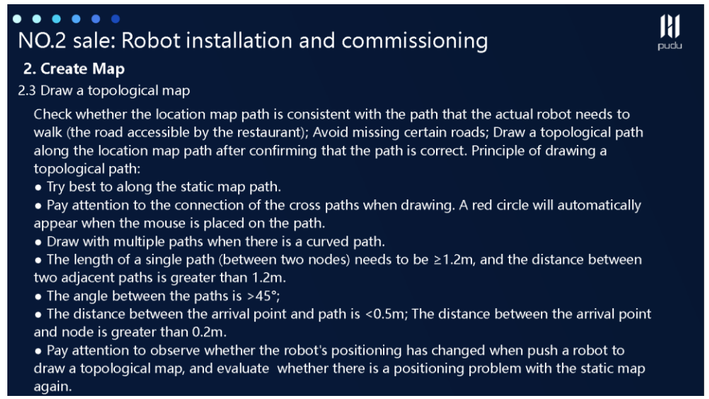
Machine size	565×537×1290(MM)
Machine weight	59Kg
Machine material	ABS/Aviation-grade aluminum alloy
Charging time	4H
Battery lifetime	7×24H (exchangeable battery)
Cruise speed	0.5-1.2m/s adjustable
Tray load	10Kg/layer

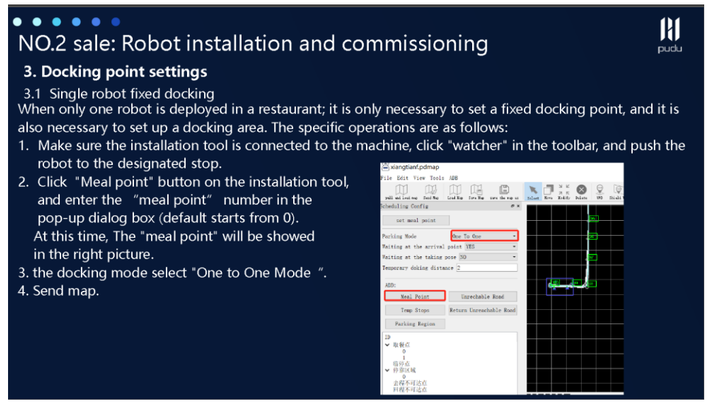
Supporting services

- **Installation training**
  Rich and diverse training methods and materials
- **After sales service**
  IOT (The Internet of things) solves more than 90% of technical problems

Installation training - Rich and diverse training methods and materials

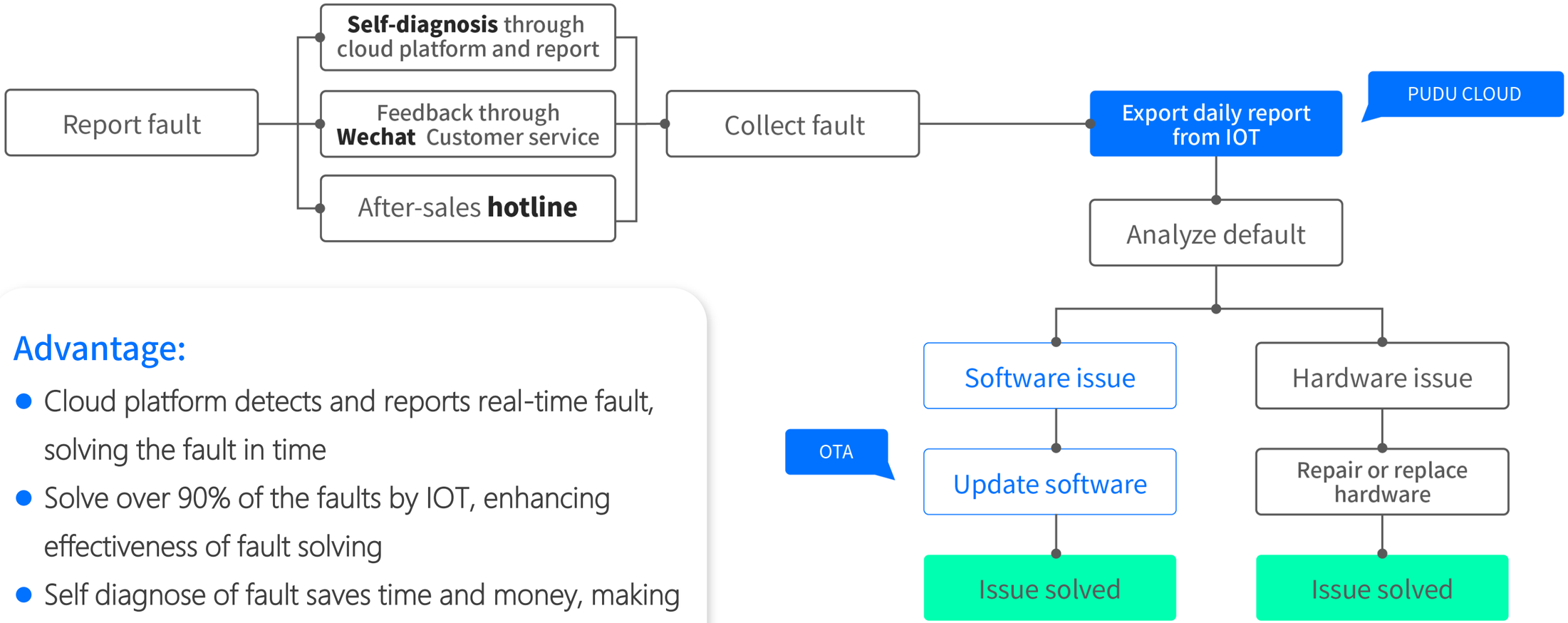
With a strong after-sales technical team, Pudu can not only support online installation training worldwide, but also provide rich and diverse training materials.





After sales service

IOT (The Internet of things)solves more than 90% of technical problems



Advantage:

- Cloud platform detects and reports real-time fault, solving the fault in time
- Solve over 90% of the faults by IOT, enhancing effectiveness of fault solving
- Self diagnose of fault saves time and money, making after-sales service much easier

Shenzhen Pudu Technology Co.,Ltd.

Established in 2016, Shenzhen Pudu Technology Co., Ltd. is a **National High-tech Enterprise** that is devoted to **R&D, design, manufacture and sales** of delivery robots, with headquarter in Shenzhen, the city globally famous for innovative hardware, and R&D center in Beijing and Chengdu along with branches and service center in over 60 cities in China.

The core technology of Pudu is low speed autopilot, robot motor driver and motion control. Our main products are delivery robots which are widely used in restaurant, hotel, office building, hospital, Internet cafe and Karaoke. Our products are sold in over 200 cities in more than 20 countries with a wide range of customers from Hidilao Hotpot, JD ,Woowa Brothers, HomePlus, Bytedance, LG to Sheraton hotel. In 2019 alone we have sold over 5000 sets of robotics.

Thank you

Shenzhen Pudu Technology Co.,Ltd.

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