



Pet Treat System (PTS)

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Abstract

The present project is aimed at developing a device that will help pet owners provide food and attention to their pets while pets are alone at home. The system focuses on the concept of Internet of Things (IoT) and provides a positive impact on the way that pet owners interact and take care of their pets.

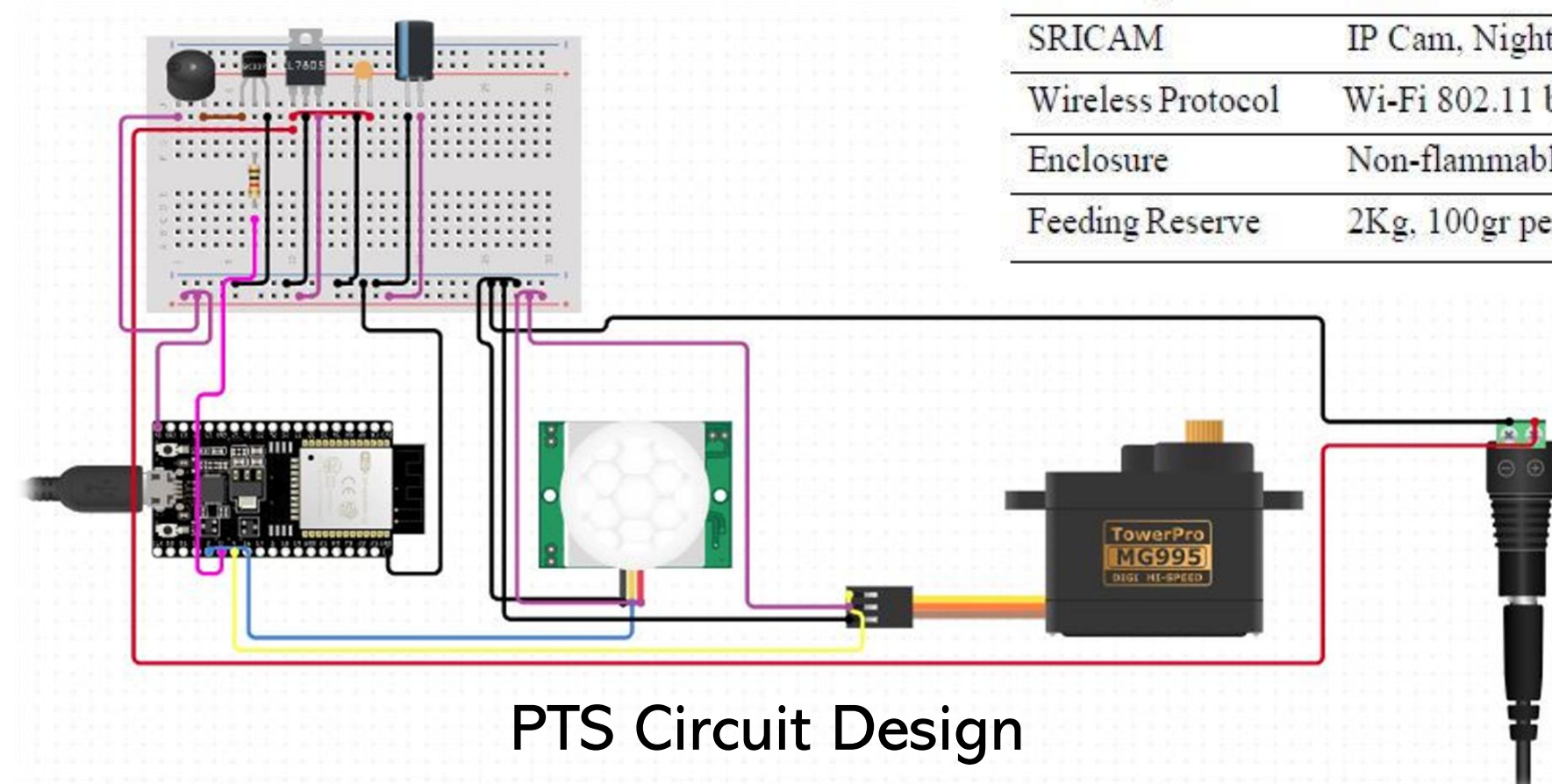
Features

- ❖ Android app user interface
- ❖ Motion detection for checking on the pet
- ❖ Camera with night vision to watch the pet
- ❖ Buzzer to attract pet's attention to the feeder
- ❖ Pet feeder with customizable food portions

Hardware & Design

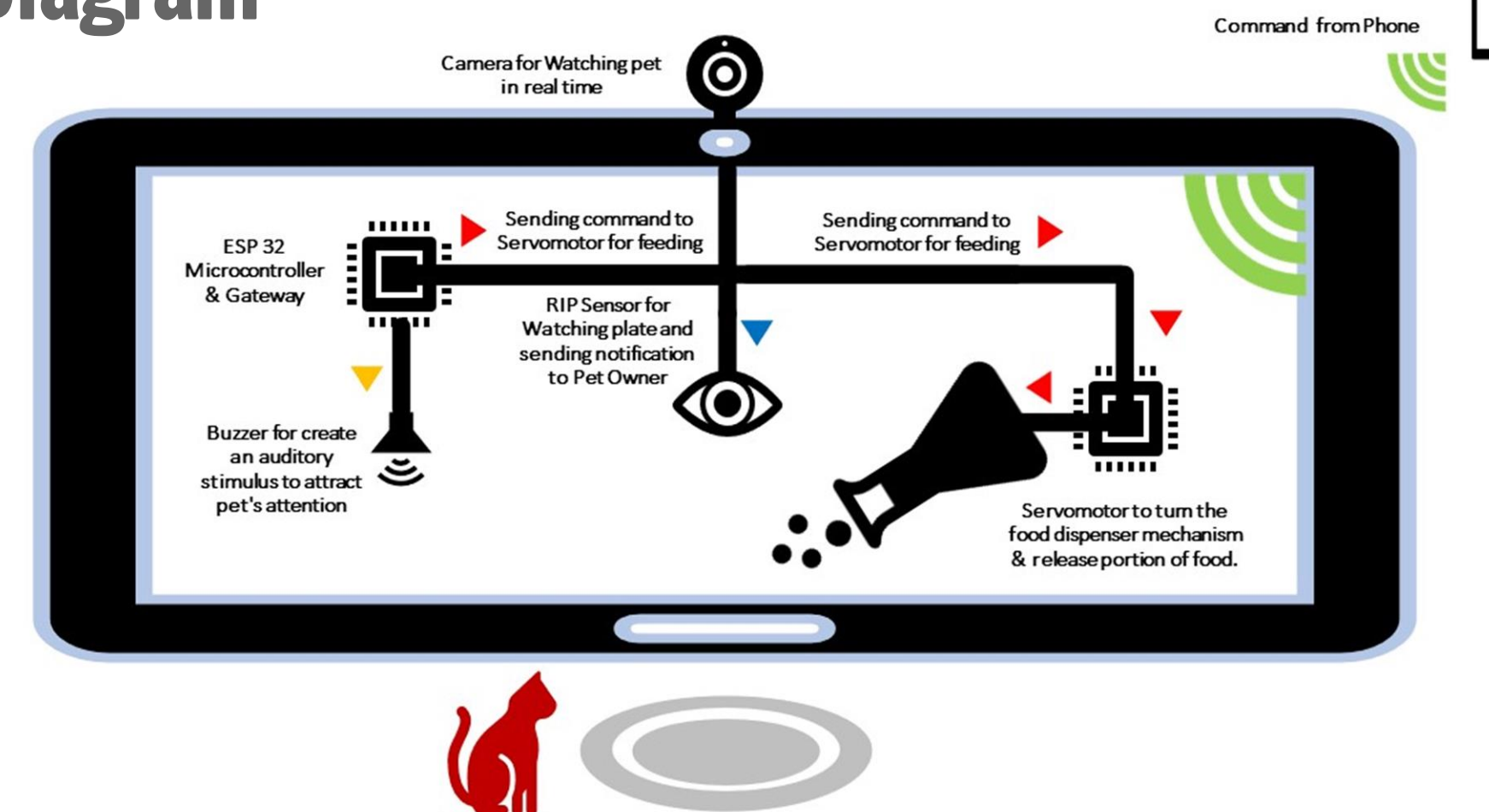
- ❖ ESP32 Wi-Fi development board (built-in Wi-Fi)
- ❖ PIR sensor to detect the motion of pet
- ❖ Servomotor to dispense food
- ❖ Buzzer to notify dispensed food for pet
- ❖ Arduino IDE is used for hardware coding

Description	Indicator
Grid Supply	240/120 VAC 60/50Hz
Power Supply	12VDC, 5A
PIR Sensitivity	Trigger up to 1m
Servomotor Angle	0-180°, 500RPM
Buzzer Speaker	2 KHz
SRICAM	IP Cam, Night Vision
Wireless Protocol	Wi-Fi 802.11 b/g/n Plastic
Enclosure	Non-flammable PVC
Feeding Reserve	2Kg, 100gr per spoon



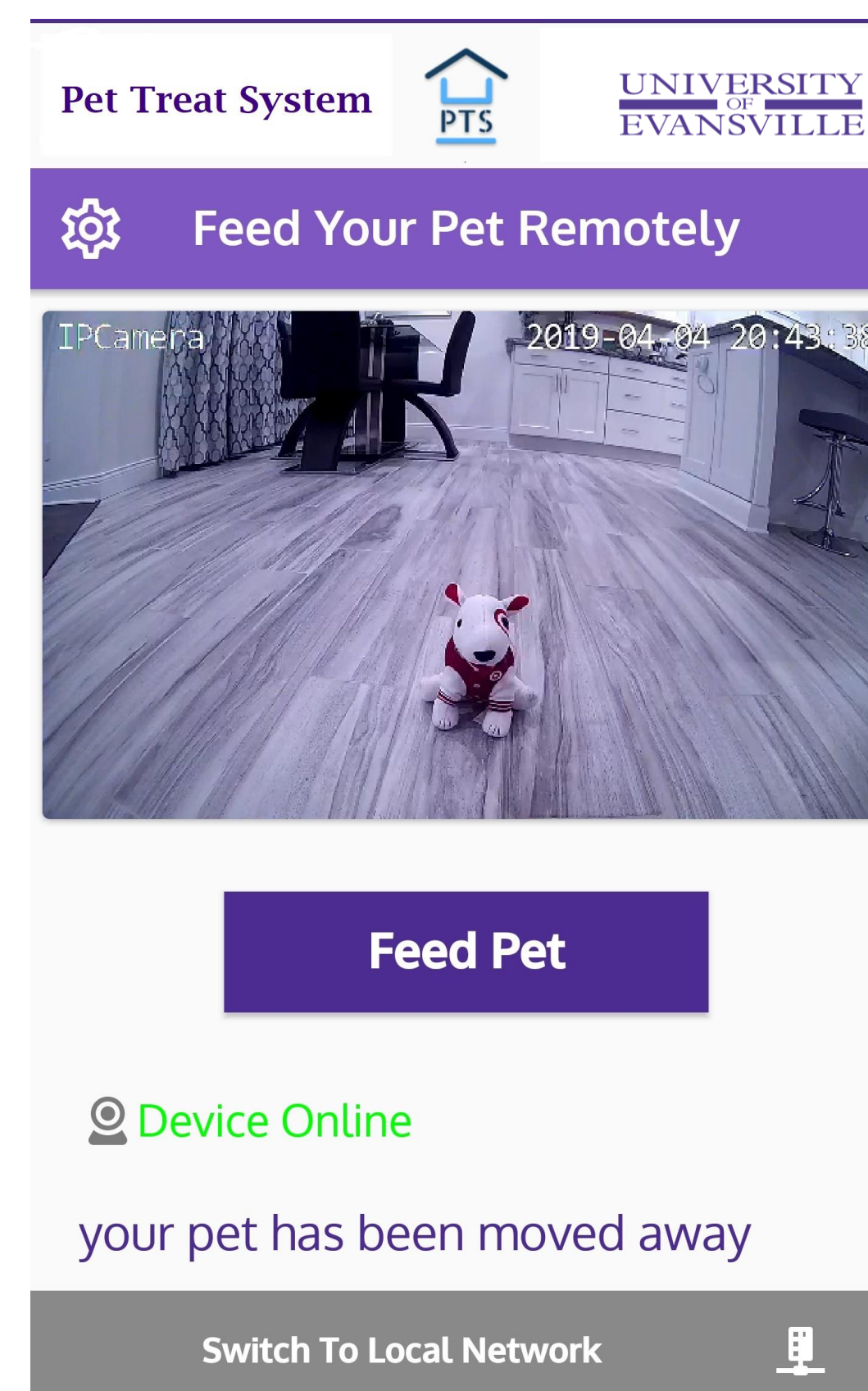
PTS Circuit Design

Diagram



Android Application

- ❖ Android Studio for android application development
- ❖ Firebase libraries for IOT
- ❖ App works in local mode and IoT mode (Internet)
- ❖ RTSP Internet service as the main streaming platform
- ❖ Feed Pet Button for feeding the pet



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Conclusion

Pet treat system and its mobile app management capability fit the interests of busy pet owners, especially the younger generation. The system can be used to feed pets such as dogs and cats. The automatic feeder can also be used for aquarium fish.