Smart Feed Automatic Pet Feeder,

Wi-Fi Enabled Pet Feeder

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**INTRODUCTION**

Dog is the commonest pet that people owned. Nowadays dog is additionally one among friend to the owner. So, dog’s healthiness is vital. Regular feeding is the most important thing, but it also one among the issues in dog’s maintenance. Owners often forget to feed their pets due to their work. A Smart Feed Automatic Pet Feeder will be the solution to those problems.

Now there are some pet feeders that are created. But the author sees there are some features that also will be added to the feeder tools. One among the feeders the author found still needs to be set manually [1]. It also has an alarm, but users even have to line manually on the devices. Therefore, the author wants to create feeding the process more efficient for the user.

The Internet of Things concept have given ideas for the author [2]. Internet era can help every work to be easier than it should. Making a pet feeder to be smart will be done by adding the Internet of Things concept. Pet feeder will be smart with adding some new technologies and makes it able to interacts with other devices. Therefore, the authors wants to create a sensible pet feeder to unravel this problem.

Smart Feed Automatic Pet Feeder is meant with RFID to authenticate your pet’s tag, in order that the other dog and cat cannot access the device. It can set feeding time and portion per serving through Smartphone, send feeding report (eaten or partially eaten), and Pet arrival when the feeding time has arrived. Smart Feed Automatic Pet Feeder has stock information, feed schedule, waiting time and owner’s name from server uses MQTT protocol. All information are sent in JSON format and can be processed by Smart Feed Automatic Pet Feeder, Smartphone and server. Smart Feed Automatic Pet Feeder will save the schedule and set an alarm which is able to interrupt when the feed time has arrived. It also encompasses a load cell sensor to measure serving size supported user’s setting.

Smart Feed Automatic Pet Feeder is very useful for Pet’s owners who have a busy schedule and sometimes leaves home. The owners do not must worry about leaving their dogs reception and might monitor their diets through his smartphone.

*A. Previous Related Researches*

There are few previous researches that are done about  automatic feeder, like Programmable Pet Feeder and Smart Pet Care System. They're not exactly addressed to feed pet generally. Programmable Pet Feeder is feeding automatically using microchip PIC18F4520 microcontroller. A stepper motor is employed to regulate the speed and position and a DC motor to dispense food. The food dispenser is known as Turn-Table which divides into Four sections and can dispense different reasonably foods. Buzzer is employed to alert when feeding time was arrived and therefore, the meal is served. User can set the schedule for every section using the LCD and input their desired timing.

Smart Pet Care System consists of an automatic feeder, an automatic pooping pad, a camera with Raspberry Pi, and an application for smartphone. Automatic feeder has 3 layers to dispense and distribute the food. It uses Arduino to manage the feeding mechanism and a weight sensor to live serving the size. A Raspberry Pi camera is employed to observe automatic feeder and pooping pad. The Raspberry Pi also acts as server. In the application, user can choose to serve size and also the schedule for 333 times feeds. Unfortunately, the applying is made in Korean language.