Automatic Pet System Project

Our Automatic Pet Feeding System alleviates the challenges of pet care by delivering pre-measured food portions three times a day, complemented by customizable notification sounds that help pets associate specific times with feeding. Weight sensors track real-time consumption rates, while LCD displays provide information on food and water levels, as well as consumption trends, enabling owners to monitor their pets' health effectively.

The system includes a one-touch treat dispensing feature with unique audio signals for special occasions, auto-flipping bowls that eliminate leftovers after meals, and a button accessible to pets for immediate water access. The STM32F103VET6 microcontroller oversees all functionalities, utilizing its ADC, GPIO & PWM for weight measurement, motor/audio control, and button interactions.

This product will take care of regular feeding schedules while offering important consumption data, helping owners understand their pets' dietary requirements.

1. List of hardware (like sensors, device, motor that you might need for your project)

* STM32F103VET6
* LED
* Weight sensor
* Speaker (notification)
* LCD (graphical representation, food supply level)
* Switch (manual treat and water dispense)
* Motor (for food dispense)
* Breadboard, wires, resistors, etc

1. Usage of STM32F103 Development Board?

The main board should be able to do the following: receive input from switches and sensors, keep track of time, control speaker, LCD and LED. STEM32F103VET can not only fulfill the above conditions but can also communicate between different components.