**Step-1 (Analysis)**

An automatic pet feeder system is to be set up for a local animal shelter, which is of low cost and programmable

For building this Automated machine, we need cost-effective equipment such as Raspberry PI to code our logic into the system, a servo motor and basic sensors.

The pet feeder must include features like:

* An automatic machine to feed the pets (cats and dogs), which is programmed for scheduled times.
* A sensor to monitor whether the food has been consumed or not
* An alert system to aware the staff (e.g., no food dispensed, food not eaten or other issues).
* Data storage system (for the staff to keep track of the records), Programmed to dispense food in the right portion for each pet.

Assumptions and Limitations

* The pet feeder can only dispense a single type of pet food
* It might not work properly if the pets decide to move the bowl from the

food dispensing machine.

* An exact bowl size should be used, or there might be chances for overflow of the pet food.
* Limited storage to store data of the pets and their eating behaviour.
* The pet feeder can only dispense either wet or dry pet food.