INSTITUTION'S INNOVATION COUNCIL
MOE'S INNOVATION CELL

Institute Name:
PRESIDENCY UNIVERSITY , BENGALURU

Title of the Innovation/Prototype:
Automatic vending machine for recyclable water waste using Raspberry pi

Team Lead Name:	Team Lead Email:	Team Lead Phone:	Team Lead Gender:
monica v	monicat9984@gmail.com	7899127670	Female
FY of Development:	**Developed as part of:**	**Innovation Type:**	**TRL LEVEL:**
2022-23	Academic Requirement/Study Project	Product	6

MRL Level:
MRL 6: Capability to produce a prototype system or subsystem in a production relevant environment

IRL Level:
IRL 9: Full Commercial Development – A full time process engineering staff continuously verifies that operations are meeting cost, yield and productivity targets.

Theme:
Waste Management/Waste to Wealth Creation,

Define the problem and its relevance to today's market / sociaty / industry need:
A reverse vending machine (RVM) works opposite to that of a vending machine , the main feature of our model is that it is a smart machine for plastic disposal i.e, it accepts plastic waste for recycling and in return dispenses drinking water. Verification is done whether they are plastic bottles or not using object detection technique based on pre-trained values. After the detection, the bottles are stored in the machine using conveyer belt it uses a IR sensor to ensure that the input is plastic and a metal sensor is used to detect if the input waste is metal

Describe the Solution / Proposed / Developed:
we have successfully done with the prototype of the Reverse Vending Machine which intake the plastic wastes and gives a drinking water to the depositor as a benefit to the depositor. Therefore, our main moto is to provide drinking water to the poor people by giving the plastic waste and also to reducing throwing plastic waste in the street or on the roads. We use the plastic waste for the recycling purpose and also to make the tar roads which has more life cycle than the normal tar roads.

Explain the uniqueness and distinctive features of the (product / process / service) solution:
Our model basically works as a reverse vending machine , the main feature of our model is that it is a smart machine for Plastic disposal i.e , it accepts plastic cans for recycling and in return dispenses drinking water

How your proposed / developed (product / process / service) solution is different from similiar kind of product by the competitors if any:
This model uses a IR sensor to ensure that the input is plastic like PET bottles . Once the garbage enters the bin, data will be sent to raspberry pi board through IR sensor, And then a signal will be sent to the aqua pump and it dispenses the water for the desired amount of time

Is there any IP or Patentable Component associated with the Solution?:
Yes - IP not Filed

Has the Solution Received any Innovation Grant/Seefund Support?:
No

Are there any Recognitions (National/International) Obtained by the Solution?:
No

***Is the Solution Commercialized either through Technology Transfer or Enterprise Development/Startup?:**
No

Had the Solution Received any Pre-Incubation/Incubation Support?:
No

Video URL:
https://drive.google.com/file/d/1EVcQPLKfzIfQ9knmNLfvu_WLQpXpSEsz/view?usp=drivesdk

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