INSTITUTION'S INNOVATION COUNCIL
MOE'S INNOVATION CELL

Institute Name: **Saveetha Institute of Medical and Technical Sciences**			
Title of the Innovation/Prototype: **AI BASED GAS LEVEL DETECTION AND ALERT SYSTEM**			
Team Lead Name: **Gayathri**	**Team Lead Email:** **samudralalakshmi0595.sse@saveetha.com**	**Team Lead Phone:** **8143774929**	**Team Lead Gender:** **Female**
FY of Development: **2022-23**	**Developed as part of:** **Academic Requirement/Study Project**	**Innovation Type:** **Product**	**TRL LEVEL:** **7**
MRL Level: **MRL 9: Low rate production demonstrated. Capability in place to begin Full Rate Production.**			
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: **ICT, cyber-physical systems, Blockchain, Cognitive computing, Cloud computing, AI & ML.,**			
Define the problem and its relevance to today's market / sociaty / industry need: **An AI-based gas level detection and alert system is relevant to various industries and homes where gas is used as a primary source of energy. The problem is the difficulty in accurately measuring the gas level inside a tank or cylinder, which can lead to unexpected gas depletion and interruptions in the supply chain. This can result in significant losses and inconvenience for industries and households. An AI-based gas level detection and alert system can accurately measure the gas level and alert the user when the level is low, ensuring a continuous supply of gas and preventing unexpected interruptions.**			
Describe the Solution / Proposed / Developed: **AI-based gas level detection and alert system that uses an Arduino Uno, an ultrasonic sensor, and an LCD display. The ultrasonic sensor is placed at the top of the gas tank and measures the distance between the sensor and the gas level. The distance is then converted to the gas level using a calibration formula. The system uses AI algorithms to analyze the gas level data and predict when the gas level will reach a critical point. When the gas level is low, the system triggers an alarm and displays a message on the LCD screen to alert the user.**			
Explain the uniqueness and distinctive features of the (product / process / service) solution: **Firstly, it uses an HX711 and a load cell to accurately measure the weight of the gas tank, which is then converted to a gas level using a calibration formula. Secondly, it uses AI algorithms to analyze the gas level data and predict when the gas level will reach a critical point, allowing for proactive actions to be taken to prevent unexpected interruptions in the supply of gas. Finally, it features an intuitive user interface with an LCD display and LED indicators to inform the user of the gas level and alert them when the gas level is low,**			

How your proposed / developed (product / process / service) solution is different from similiar kind of product by the competitors if any:
Firstly, the system uses an HX711 and a load cell to accurately measure the weight of the gas tank, providing a more accurate measurement of the gas level compared to other systems that use less precise sensors. Secondly, the system uses AI algorithms to analyze the gas level data and predict when the gas level will reach a critical point, allowing for proactive actions to be taken to prevent unexpected interruptions in the supply of gas. Finally, the system has an intuitive user interface with an LCD display and LED indicators.

Is there any IP or Patentable Component associated with the Solution?:
No

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://photos.app.goo.gl/gQKuBTyADawFowpN7

Innovation Photograph:
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