

INTRODUCTION

The abrupt running out of cooking gas has been a real headache to most consumers since it destroys/disrupts one budget plan. This project aims to end that by predicting the next time the gas will run out (in advance) and enable the consumer to make necessary plans accordingly.

BACKGROUND OF THE PROBLEM

All around the world, cooking gas is a very essential commodity in a human's survival. As a result, there has been various studies and research done to show various ways of keeping track of the gas level in the cylinder but they have their down side. In most cases, people have a tendency of approximating the remaining gas by either lifting the cylinder and estimating the level according to its weight, while others tell by the color of the flame. But this method isn't accurate.

According to an article done by DNA Webdesk on August the 16th 2021, one can find out the amount of gas left in the cylinder by using a wet cloth. One should wrap a wet cloth round the cylinder for a minute, then note the changes of the cylinder after some while. Some parts will dry, others will still be wet. This is because the empty part absorbs the water since the cylinder is hot. The downside of this method is its results are varied with different climate/weather. Hot weather may influence the water to dry faster and vice-versa. This makes this method unreliable.

The other method that can be used is a device called Gas Bottle Level Gauge sold by Elgas. According to a blog posted by Elgas in July 2022, the gauge is an ultrasonic unit sitting under the cylinder which sends reading to a mobile app through Bluetooth. But they have also noted the challenge facing this device. First of all is that it can't support a 45kg cylinder and above. Also the device won't read the exact level since LPG is liquefied gas not compressed gas therefore the pressure may vary.

PROBLEM THIS PROJECT WILL ADDRESS

This project mainly addresses the inconvenience caused by the sudden running out of cooking gas. This can be either by sudden budget pressure for unplanned need of money, or for late night searching for refilling stations.

MAIN GOAL OF THIS PROJECT

The main goal of this project is to make the refill/replacing process of cooking gas to be smooth and easy for consumers.

SPECIFIC OBJECTIVES THIS PROJECT TO ACCOMPLISH THAT GOAL ABOVE

1. To create an algorithm that can predict the next time the gas runs out.
2. To create an easy user-friendly platform where a user can request for delivery of a refill of the cylinder.
3. To create a space one can save up on cash for the next refill (So as to avoid unplanned use of money not budgeted).

ANTICIPATED OUTCOMES RESULTING FROM THIS RESEARCH/PROJECT

1. An effective and working prediction algorithm.

2. A functioning system.

METHODOLOGY TO BE USED TO ACCOMPLISH THE ABOVE OBJECTIVES

1. The research intends to use questionnaires to collect data of the challenges faced by people on the concept of cooking gas (before the refill, during the refill and after the refill)
2. The research will use a cross sectional survey to determine the preferred method of refilling is suitable for the public.
3. The research will collect primary and secondary data on the current methods used to determine the level of gas and factors that affect the rate of usage of the same in different homes.
4. The project will be using data gathered from various consumers on different classifications and factors like No. of people in the family, number of times they cook, if they have a child below 4 years or not, size of the cylinder and period the gas lasts. The above data will be used to train the model to be able to predict the expected outcome.

REFERENCES

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