Project Summary

The Smart Fridge is a fresh and helpful idea that can eliminate some of the everyday problems faced by fridge users. The Fridge features a user friendly interface and a 6.43" touchscreen for user input. The Inventory Tracking System allows users to see what items are in the fridge and the quantity or weight of those items. This means users do not have to open the fridge and stick their head inside for long periods of time just to take stock of the fridge inventory. This also reduces energy wastage due to cold air escaping.
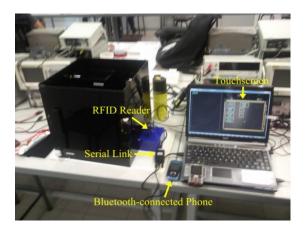

Outside the fridge, an attractive graphical interface greets the user

The Smart Fridge has 3 ways of taking stock of items. First is using Force Sensitive Resistors to gauge the weight of items placed on designated Racks. Secondly, RFID tags are attached to an item; it is then tapped against a RFID Reader before adding into the fridge. Thirdly, the user can add the item into the fridge and then update the inventory through the user interface.

There is a Special Compartment in the fridge which can be locked. Only users who have the access code can unlock it. It is useful as a compartment for parents to place items they do not want children to access to. Control of this compartment eg. entry of code is done through the graphical interface with touchscreen inputs.

In case the fridge door is left open accidentally, an Auto Door Closing feature shuts the door, thereby reducing the chances of that all too familiar sight - a fridge with melted ice and spoilt food items greeting users. There is also Humidity Control, where a fan blows air through a dehumidifying box when the humidity in the fridge is too high.

A light on the door handle illuminates to help the user find the handle in a dark environment. Lastly, the Smart Fridge is able to alert users in case the Auto Door Closing fails due to an obstruction blocking the door or if items tracked by the fridge are running low. This is done by a phone connected through Bluetooth sending SMS Alerts to the user's mobile.