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An AI-powered cuisine for smart consumption with enhanced nutrition

Cuisine 2.0



**Feasibility Study**

**Big Data Analytics**

**Polytechnics Mauritius Ltd**

**Final Year Capstone Project**

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2021

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# Proposals

## Cuisine 2.0 - An AI Powered app on smart consumption for enhanced Nutrition

*[Selected Project]*

**Description:**

A multiform technology to make old boring kitchens smart. It uses an AI engine for object detection on a in an IOT black box for keeping record of storage of food items in inventory. It also consists of a mobile app which can take out a grocery list whenever required, check inventory, suggest recipe based on available ingredients, list out missing ingredients for a recipe. Suggest healthy food recipes and tips as per the user preferences.

## Smart Automated Company Vehicle Management System

**Description:**

A smart vehicles management system for a company. It consists of vehicle plate number recognition to keep record of vehicles entering and leaving the company. It also consists of reserved parking management which can automatically lower the blockage for the vehicle of the reserved parking user.

## Industrial Universal Object Defect Detection

**Description:**

A production system to detect defect of products being produced. Using a trained model, a high-quality camera and a processor, this can be achieved. The system also classifies all products into batches for better identification.

# Aim of the Project

## Current problems

“Throwing away food is like stealing, from the table of those who are poor and hungry”, quoted by Pope Francis. Around 1.3 billion metric tons (1.43 billion tons) of food, or one third of what is produced for human consumption, gets lost or wasted every year, according to the United Nations’ food agency. There are several reasons responsible for this cause, namely: -

* Food wastage

Households are responsible for the largest portion of all food waste.

Causes of food wastage may include:

1. Lack of appropriate planning before preparing a meal may lead to wastage of ingredients.
2. Over-preparation of food often leads to wastage if all the food is not consumed or becoming staled with time. People often forget to eat leftovers, and end up throwing them away.
3. Food is spoiled at home due to improper storage management and lack of visibility in refrigerators.

* Shopping issues

1. Most of the time, individuals **do not keep track of their inventory** of groceries which often leads to impulse and bulk food purchases at retail stores and thus these consumers **might purchase items** that are **already stored** in their inventories.
2. Sometimes people overbuy items, **without** appropriately making a grocery list plan which **should include the necessary ingredients/items** for preparation and consumption.

* Busy professional’s lifestyle issues

1. With a busy life and busy schedule, food becomes a low priority. Lack of time to reflect on a healthy meal preparation in a short period of time become a major problem.
2. Making a grocery checklist is less of a priority for these busy professionals because they hardly have time to evaluate on their inventory and have difficulty to prepare their grocery list before purchasing.
3. Without the Cuisine 2.0 mobile application, he will have to be on the spot in order to check his inventory details.
4. Busy professionals may find it hard to plan and maintain a nutritious diet. In this case, the “Tip of the Day” system may assist them to consume at least one nutritional food, like apple.

* Inventory Management issues

1. People might forget that essential items like rice and flour is out of stock, so a reminder is sent to notify the user.
2. Someone can easily misplace an item purchased or even forget to add them to their own inventory list if they have one; this may lead to overbuying and wastage of food.

With the “Inventory list” system people have the ability to track their inventory.