# Objective

Our objective is to make a budget-friendly effective decay robot to detect the lifespan of fruits and vegetables for ensuring the supply of fresh products to consumers.

A decay robot is an inventive machine learning-based robot that can detect the shelf life of fruits and vegetables both inside and outside of cold storage. By accurately identifying the ripeness of fruits and vegetables and notifying workers before they spoil, the robot can help minimize food waste. The decay robot, in addition to decreasing food spoiling, can help ensure that consumers have access to fresh and healthy produce. It can help to prevent consumers from eating spoiled fruits and vegetables, which might be risky for their well-being. This robot is an innovative application of machine learning technology with the potential to revolutionize the supply chain, reduce waste, and focus on promoting health and sustainability.

# Goals

The purpose of tracking and analyzing food spoilage using Machine Learning is to keep track and even maintain fruits and vegetables to prevent spoilage caused by climatic and atmospheric changes. Healthy eating practices and food quality are major topics of discussion when it comes to food waste, as there have been instances where dangerous chemicals were found in fruits and veggies.

Our goals behind this invention of decay robot are:

* To reduce the product loss of warehouses.
* To ensure people have fresh fruits/vegetables.
* To implement cost effective system for detecting food freshness.

# Usage

Shelf life is mainly defined as the amount of time that a food product remains safe as per microbiological standards while maintaining the intended sensory, physico-chemical, and nutritional quality. Food spoilage can be caused by a variety of human, chemical, and biological causes, including plants, enzymes found in plant food tissues, insects, parasites, and microbes.

The usage of decay robot to detect lifespan of fruits and vegetables are given below:

* Inside or outside of cold storage facilities or supermarkets.
* On the process of post-harvest transportation.
* During the harvesting period, to prevent rotting fruits and veggies.

# Benefit

According to the World Food Programme (WFP), in recent years, global food production has reached a record high; however, one-third of all food that is produced for human consumption is wasted or discarded, representing approximately 1.3 billion tons. Post-harvest food loss is a major source of food insecurity for millions of families globally. To achieve zero hunger by 2030, no more food must be lost or wasted.

We can use our decay robot to resolve these issues. The benefits of using decay robot to detect lifespan of fruits and vegetables are given below:

* Rotten fruits and veggies can be detected fast and efficiently.
* Reduces product loss and saves money.
* Capable of providing consumers with a healthy and fresh food supply.
* Helps in preventing food spoilage.