# Chanakya

## The next-gen store-keeper!

Problem Statement

Tons of food and other perishable goods amounting to billions of dollars go wasted every year, in most countries just because they expired. The concern is not just about the money, but it’s also about the natural resources that are simply wasted this manner. In the pursuit of taking the world towards sustainable development, the wastage of expired goods lying in the stores and not being sold just by human error and allegiance is a major problem standing to be solved.

Our Idea

We planned to address this problem using statistics & Artificial Intelligence or AI and developed a software that would manage the inventory by keeping a track of the details, specially the expiry dates of all the goods in stock in a store or shop or any storage place and notify the shopkeeper time-to-time about the goods that are approaching expiry so that the seller can try to sell it as soon as possible. It would also predict the demand of all the goods that should be sold thereby giving the seller an edge over his job and make him more efficient in controlling his business. The main motto of this project is to reduce wastage as much as possible to make the shop a sustainable one Reducing wastages on the other hand would also reduce losses and would multiply the profits of the businessman.

Working of the model

This application has a demand prediction model that can predict the demand of the goods for a month. It uses statistical analysis (EMA analysis) and regression methods to do so. The application also maintains two databases-the daily sales records of the store which is used in predicting the demand of the products and an inventory database which lists all the products available in the shop.

The app first checks for the products which are approaching expiry relative to a given date or time period. It then calculates the sales of those products from the daily sales database and predicts the demand. Depending upon the degree of demand, the application advises the user to put the products on high discount, sale, etc. accordingly. In this way the chances of the goods getting wasted in the shop itself are reduced and overall wastage of natural resources are also reduced.

Developed by

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Salient points

Good Morning Sir!

I am Adiptya Ghosh. I am student of class 11 in delhi public school howrah. So sir we had worked on a project called Chanakya. We had named the model that we created as Chanakya because it is sort of an business advisor.

1. Problem statement – To reduce wastage of perishable goods or goods that expire, early by efficient prediction of their demand using regression methods at present.
2. The model takes in the predicted demand and the present stock as the input. Then depending on how close the expiry date is and the quantity and valuation of all the stock present, it suggests the user, which in this case might be a shopkeeper, to sell the product accordingly, for example, if a particular product is nearing its expiry in a couple of weeks, and the stock present is not predicted to be sold within that time following the present demand, then maybe it would suggest the shopkeeper to produce it on discounted sale.
3. So in this way not only will the products would be prevented from being wasted. The seller overall efficiency would also rise and he would incur lower losses hence. And make him a sustainable seller!

IPR

1. Its not about coming up with the concept its about how to come about using it
2. Design rights is for what is designed and patent right is for what is made