

# Retail intelligence: a key to the effective supermarket management

[Business](#), [Marketing](#)



As technology continues to evolve consumer behavior does too- and retailers need to stay ahead of the curve. As we move rapidly into the shopping trends and seasons, what the biggest challenge faced by the consumers are the long and tiring queue at the counters. Due to such challenge the retailers tend to lose certain amount consumers. Using the proposed project, we plan on eliminating such challenges and making the shopping experience of the shoppers easy.

For our project, we make use of AI and smart camera, using which we would be calculating the number of customers entering and leaving the shops. It will also calculate the number of shoppers at the billing counters. And then at last we will be comparing both i. e. number of customers entering but not present at the billing counters and so the store managers and work accordingly. Another aspect of our project would be, at a particular counter, if the queue exceeds the given threshold, the system will automatically send out a notification regarding the extension to the store manager. After sending out a notification the same would be feed into the feedback database. And this data will be visible to assistant manager, department manager, general manager, regional manager, and so on. Using such analysis the manager will be able to take necessary actions to ease the customer experience accordingly.

Our main aim is to increase the retail rate of the stores. If the billing queue exceeds the predetermined threshold then it will notify the manager and the staff which will help the retailers in managing the customer service. This technology will enable customers to improve their shopping experience. As

the world is growing more towards the digitalization, one of the main focus by the retailers and supermarket franchises would be customer retention. During the festive seasons the number of people visiting the stores increases by twice the normal amount, due some reasons the stores are unable to take proper measures in order to maintain a perfect shopping environment. As the human nature intends, not many are able to wait in long queues and many even due to this reason won't choose on shopping from that particular store, i. e. , avoiding shops with large number of people. This might turn out to be a negative factor for the retailers and the supermarket franchises.

Another problem would be the customers never revisit and may choose to shop through an online ports. Then modules used in our proposed projects are as follows:

- Business Intelligence
- Image Processing
- Video Analytics
- Notification Module
- Data Analysis

In our application there are multiple supermarket franchises that can use our project in order to maintain a good shopping experience. The proposed project even measures the length of the queue and maintains a predetermined threshold in order to help the shoppers as well as staff. This also helps the managers and staff to maintain the queues and provide good shopping experiences. There have been tremendous efforts by lots of people to develop a system that can help the customers to improve their shopping

experience. There are certain systems close to our systems but there is no system that detects the long queues at the billing counters and sends an alert notification to the staff on exceeding billing queues above the predetermined thresholds. In fact there is a lot of research going on this subject and people are trying to find different new solutions to the problems.

Presently, the customers coming to the supermarkets have a major issue regarding the long billing queues and on top of that poor management by the staff due the billing queues, which therefore leads to a bad shopping experience for a customer. We are hopeful that our system might improve customers shopping experience as it will give an alert on exceeding billing queues, so that the staff can manage accordingly. Although our system works most of the time, sometimes the sensor sends mistaken alert, this is because of the carts or the luggage of the customers kept carelessly or due to some miscalculation. The Retail Intelligence is a system for supermarkets, using this the staff of the market can get an alert on the increasing queues at the billing counters. This is mainly used for proper management at the supermarket. Currently, devices and tools developed to address this issue are limited in their capacity. Here, we give them the system that senses the number of people at the billing queues, which will accordingly give them a brief idea on what measures to take at times when the supermarket is crowded. We hope to solve this long going problem and help the supermarket team so that they can manage their store in a better way.