SELECT MAKEATHON

The Shipkart

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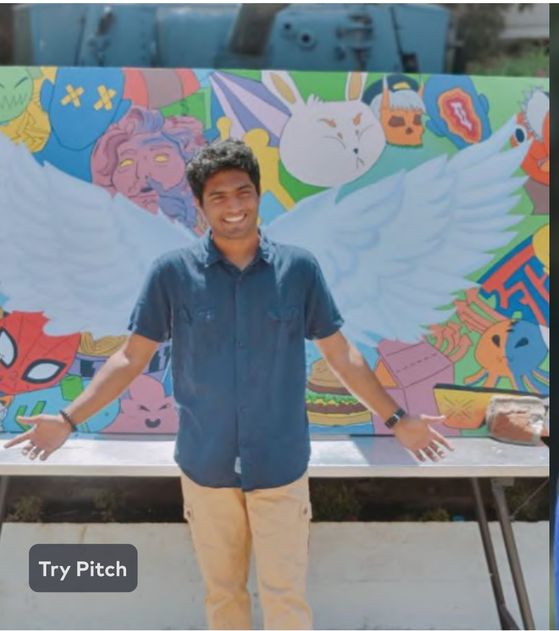
Team Members

Yash Phatak



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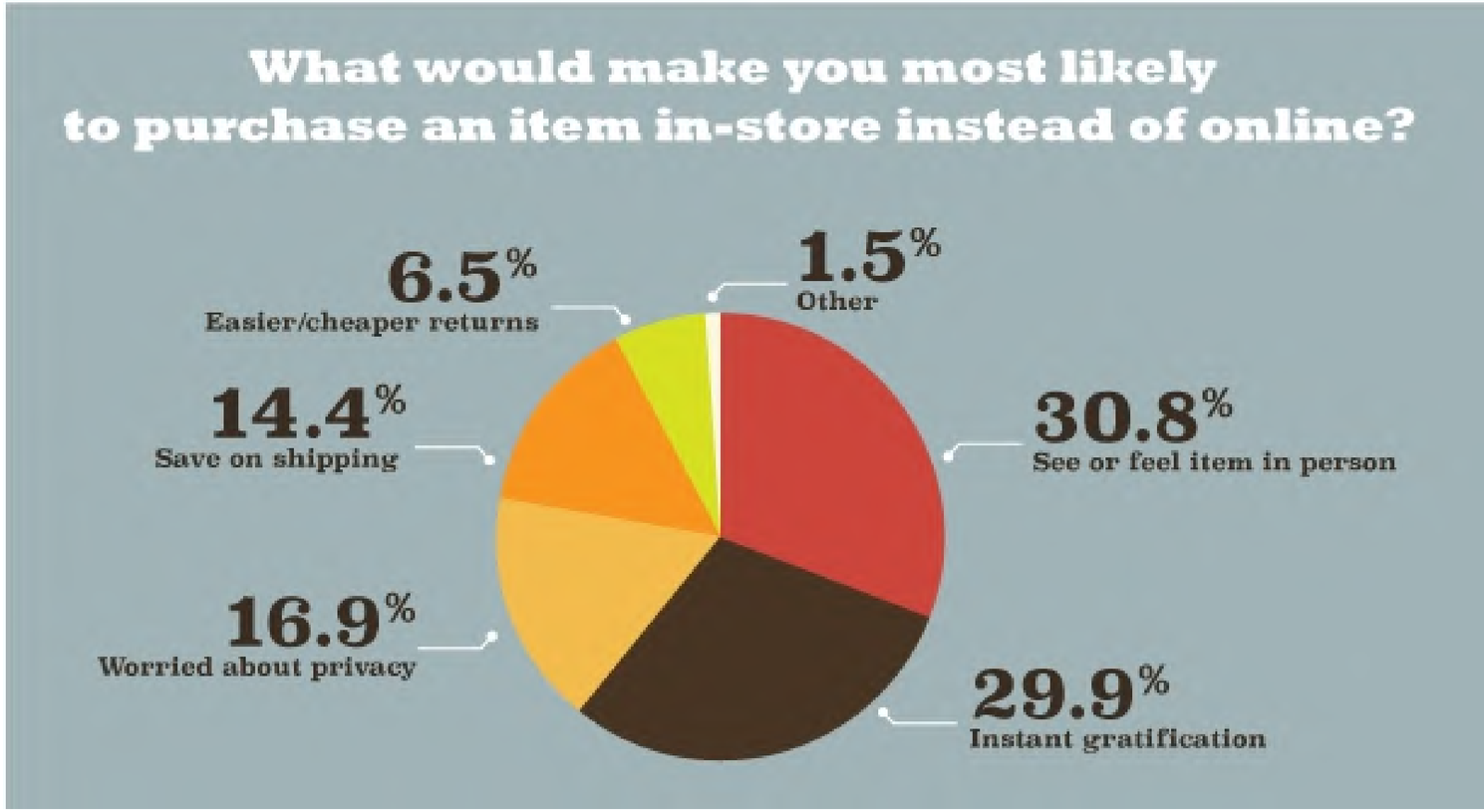
ET09

The problem

Problem statement:

Design a system that will reduce the time for billing procedure.

The numbers



5-10

minutes to bill an item, get the item bagged and then pay the bill.

60 %

of the waiting time in payment queue could be reduced

Over 75%

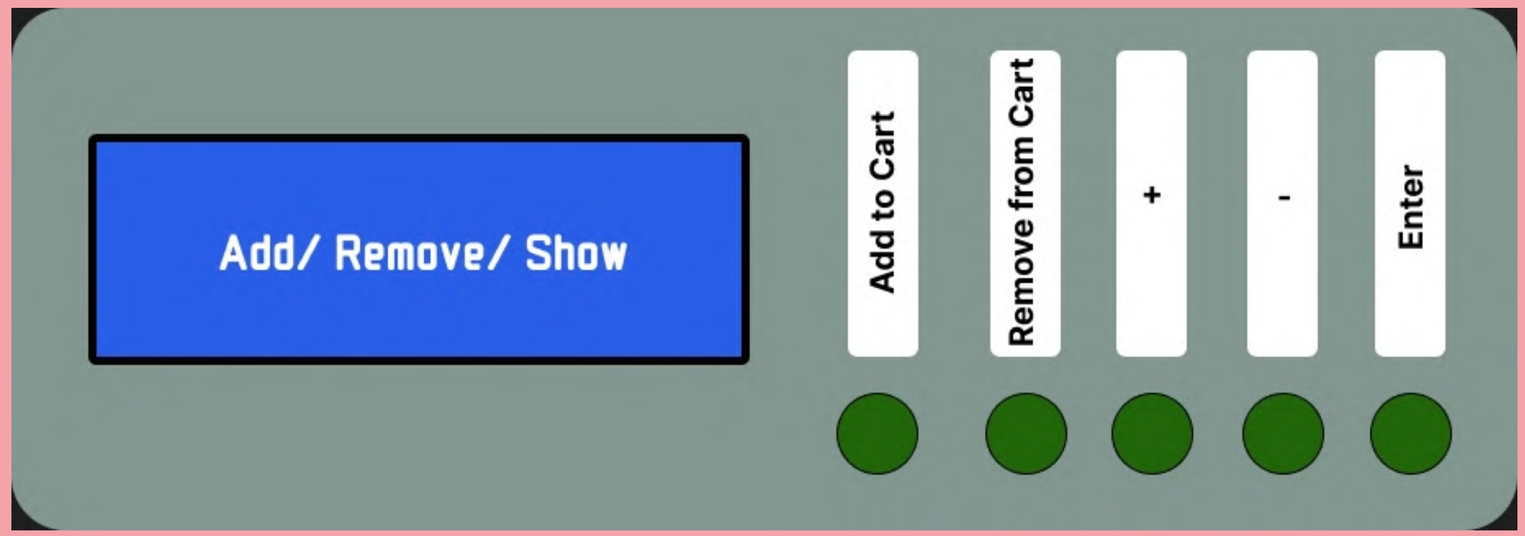
Sales are made offline

The solution

Our answer is to create a smart cart equipped with barcode scanning technology, an esp-32 camera module, and an esp8266 to access a real-time database.
Customers can scan products while they shop with a smart cart, eliminating the need to wait in long checkout lines. This saves time and improves the entire purchasing experience.

Our aim

a product that is simple to install on the current retail carts and transforming them into smart carts.
Saving customers from long billing queues as they bill themselves while shopping



Tech flow behind our product

Customer will scan the Barcode/QR present on the item

Customer will access the cart

ESP-32 Camera Module along with OpenCV model will detect the barcode and connect its unique id to a real time database(firebase)

Whenever the first item is scanned successfully , the esp-8266 connects to the real-time database and a new cart is formed in it

The customer will get an option of adding/removing the item along the quantity.

Once the customer specifies the process(add/remove) and the quantity , the esp-8266 connects to the real time data base and changes are made in the new cart

Once the shopping is done , the database will directly give a bill of the items present in the cart with help of the database

Once customer pays the cart will be removed from the database

As the RFID scans the at the exit terminal after the payment cart is reset for anothr customer

Future Scope:

- The YOLO module in the shopping carts can be used to identify and track items as they are placed in the cart, which can help improve inventory management and reduce checkout time.
- Addition of an app that can connect the whole ecosystem and make the shopping experience more seamless and fast.
- Adding the Contactless payment methods to the cart module itself to make it self-sufficient.
- The Automatic Restocking feature could be used to track the inventory levels in real-time benefitting bother the owner as well as the customer by ensuring that the products are always stocked.
- A touch screen panel for the better shopping experience.

Thank You

Github link: https://github.com/JatinPatil2003/SmartCart

Video Link: https://drive.google.com/drive/folders/1VWxaErulYIB0mqdVo4QjNyLnnTascM4T?usp=sharing