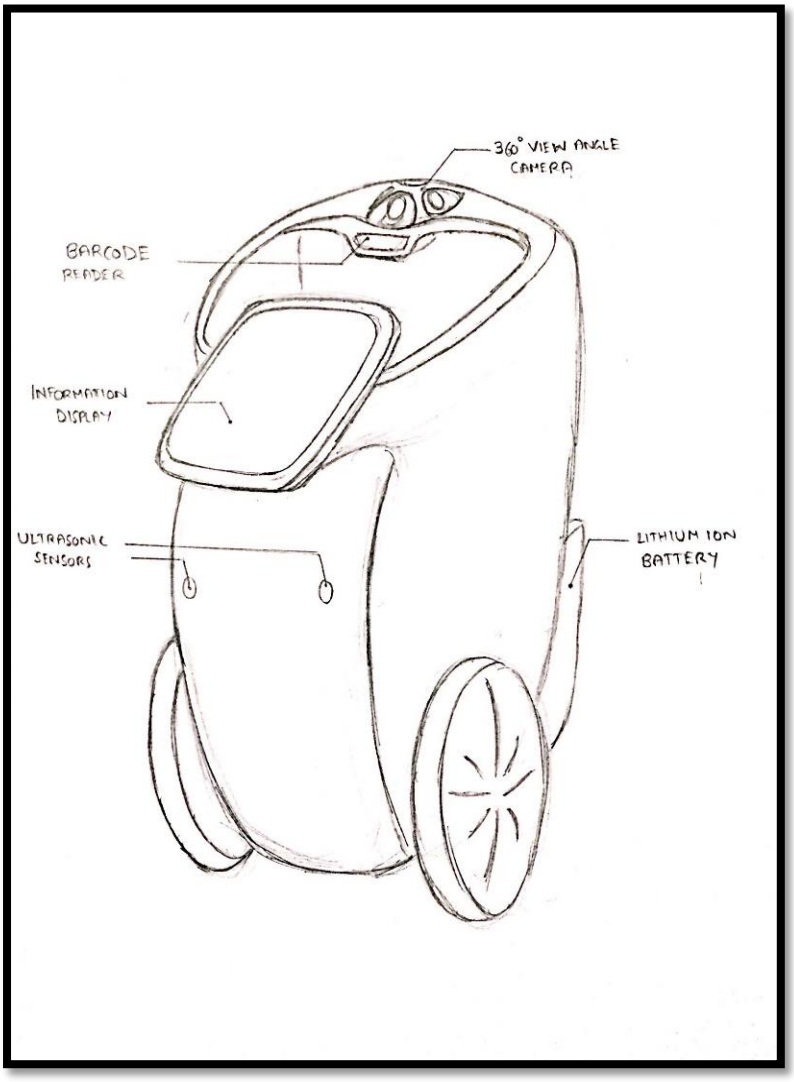
DIGITIZED SHOPPING CART



Aim of the project was to transform the traditional brick and mortar shopping experience by digitizing the existing shopping cart to maximize customer productivity and satisfaction by merging the power of online retail and the pleasure of offline retail. It also provides a stress free shopping experience for the aged by enhancing its usability.

Features:

- Interactive display unit for displaying product information, total bill, indoor navigation, product recommendation and smart home connectivity.
- Indoor navigation so that customers can locate items to buy inside the shop. Wi-Fi/Bluetooth modules were used as node points whose RSSI strengths were used for computing position using Trilateration algorithm.
- Proximity based product recommendation to recommend items to customers in nearby shelves using Bluetooth nodes.

- Billing using RFID tags and online payment for cashier less shopping.
- Smart kitchen connectivity so that customers can check for availability of items in their homes.
- Web application for displaying product related information.
- Autonomous mobility to provide a hands-free shopping experience. Viola-jones algorithm was used for customer face detection and KLT transform for tracking the customer. These methods were implemented in MATLAB which was linked to an arduino board to control the motors for the wheels.