

A Point of Sale Grocery Cart

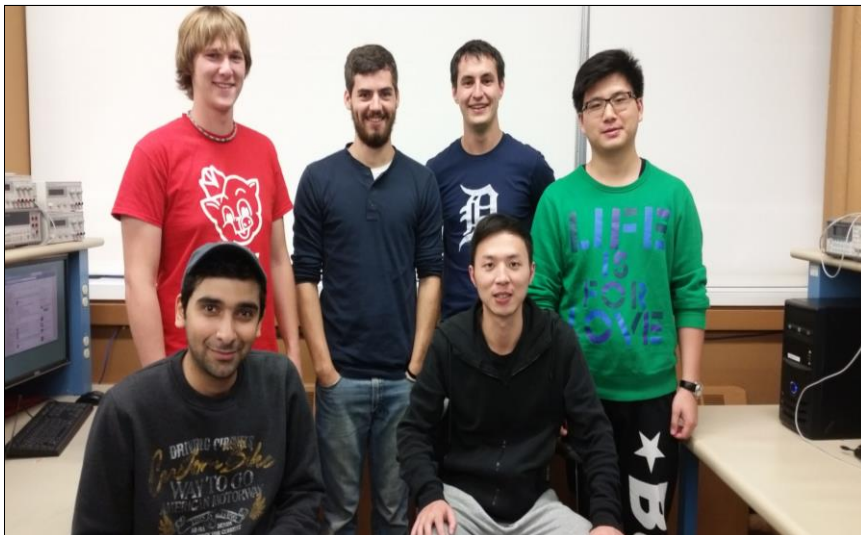
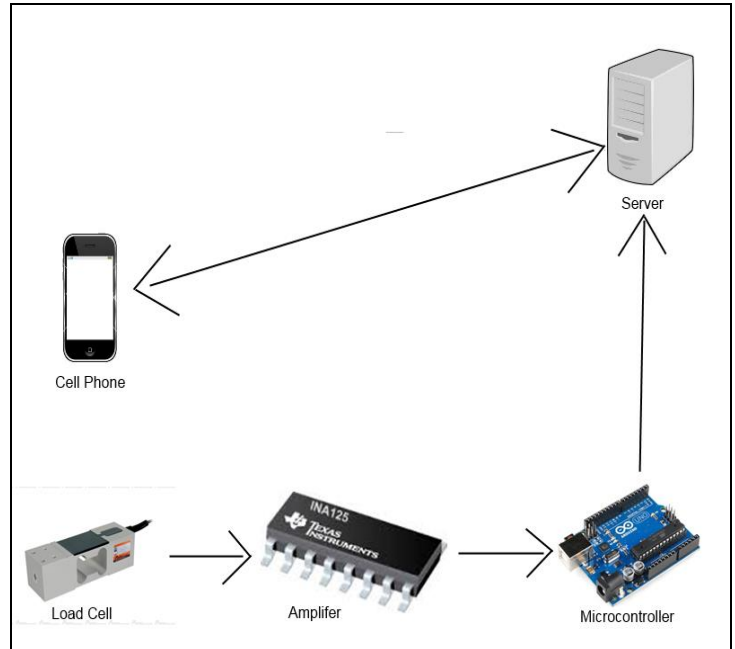
MSU Engineering Department

The goal of the point of sale grocery cart is to create an easier system for shoppers to use, while cutting down on the costs for the store. This new system involves placing the scanner normally wielded by the cashier into the hands of every shopper. As a patron of the store travels between aisles and gathers items, they can use their smartphone to scan the items as they put them into their cart.

Once an item has been scanned, the cart which is equipped with a set of load cells reads the weight of the item added to the cart and verifies it with the store's database. This helps confirm the correct item was placed in the cart. In some cases, an image of the item will be taken to identify it. When finished shopping, the shopper will be able to use a credit card to checkout directly from their phone. This means they can skip the long checkout lines for good. The carts will be able to leave the store once the customer has checked out. If the customer leaves without paying, an alarm will sound.

In addition to the changes to the way a shopper checks out, the system can also automatically apply electronic coupons to the cart to avoid the chance of the user forgetting them. Lastly, the final product could recommend items to the shopper based on purchasing history and offer incentives to purchase these items again such as coupons.

The current checkout system is in desperate need of an update to save time and money for both sides of the grocery store.



Michigan State University

Team Members (left to right)

Steven Hartz
Cottage Grove, Minnesota

Matt Rasmussen
Rochester, Michigan

Ben Lauzon
Grosse Ile, Michigan

Shuangfei Liu
Shanghai, China

Husain Aleid
Qatif, Saudi Arabia

Taoping Zhao
Suzhou, China

Team 6

Project Sponsor

Dr. Satish Udpa
East Lansing, Michigan