



Smart Pantry System

Team Members: Christopher Stevenson, Trejon Adams
Professor Stuart Kleinfelder
Department of Electrical Engineering and Computer Science

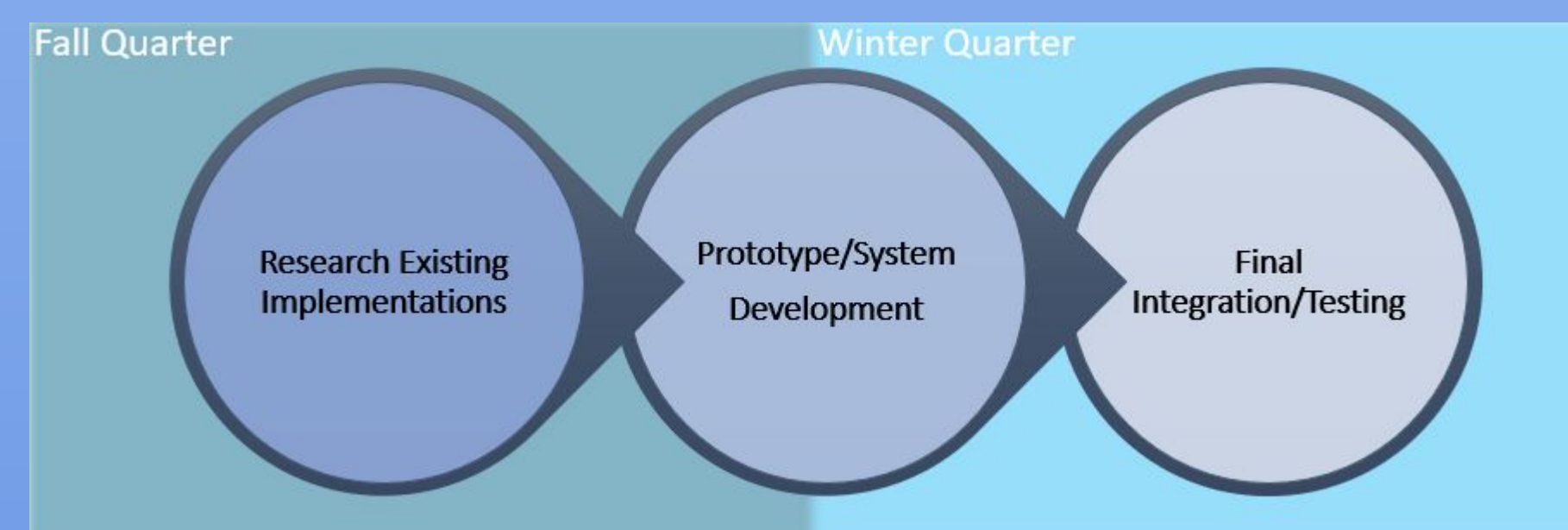
Background

Consumers frequently run into the issue where they are out grocery shopping and they can't remember if they have a specific item at home already. This can lead to unnecessary food waste if they already have the item at home in their pantry. We hope to offer a simple solution to consumers to make the grocery shopping experience easier and faster than ever before.

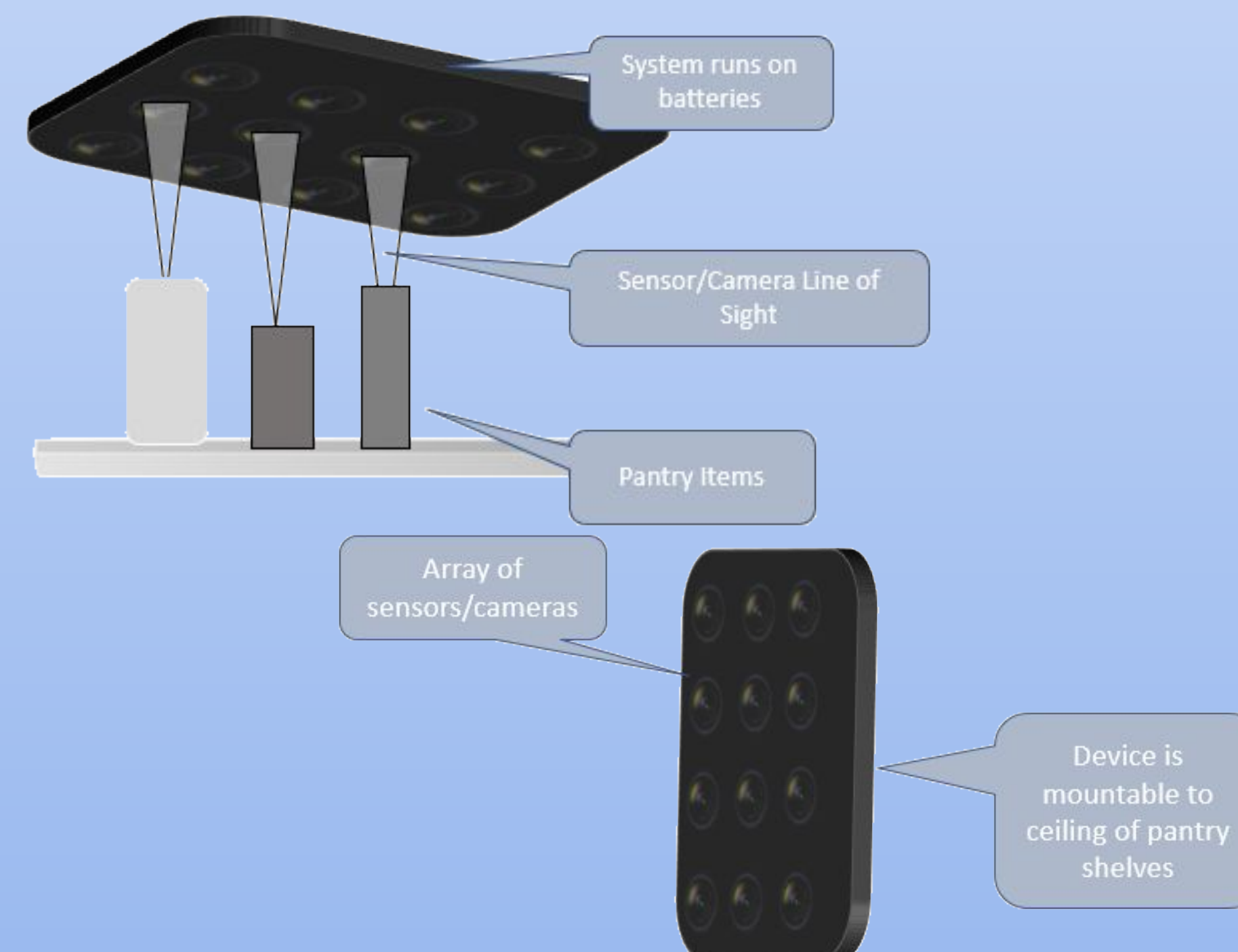
Project Goal

The goal for this project is to create a smart pantry system that is able to automatically keep track of what goes in and out of one's kitchen pantry. There will be an app to accompany this so that the user can see the contents of their pantry while out grocery shopping.

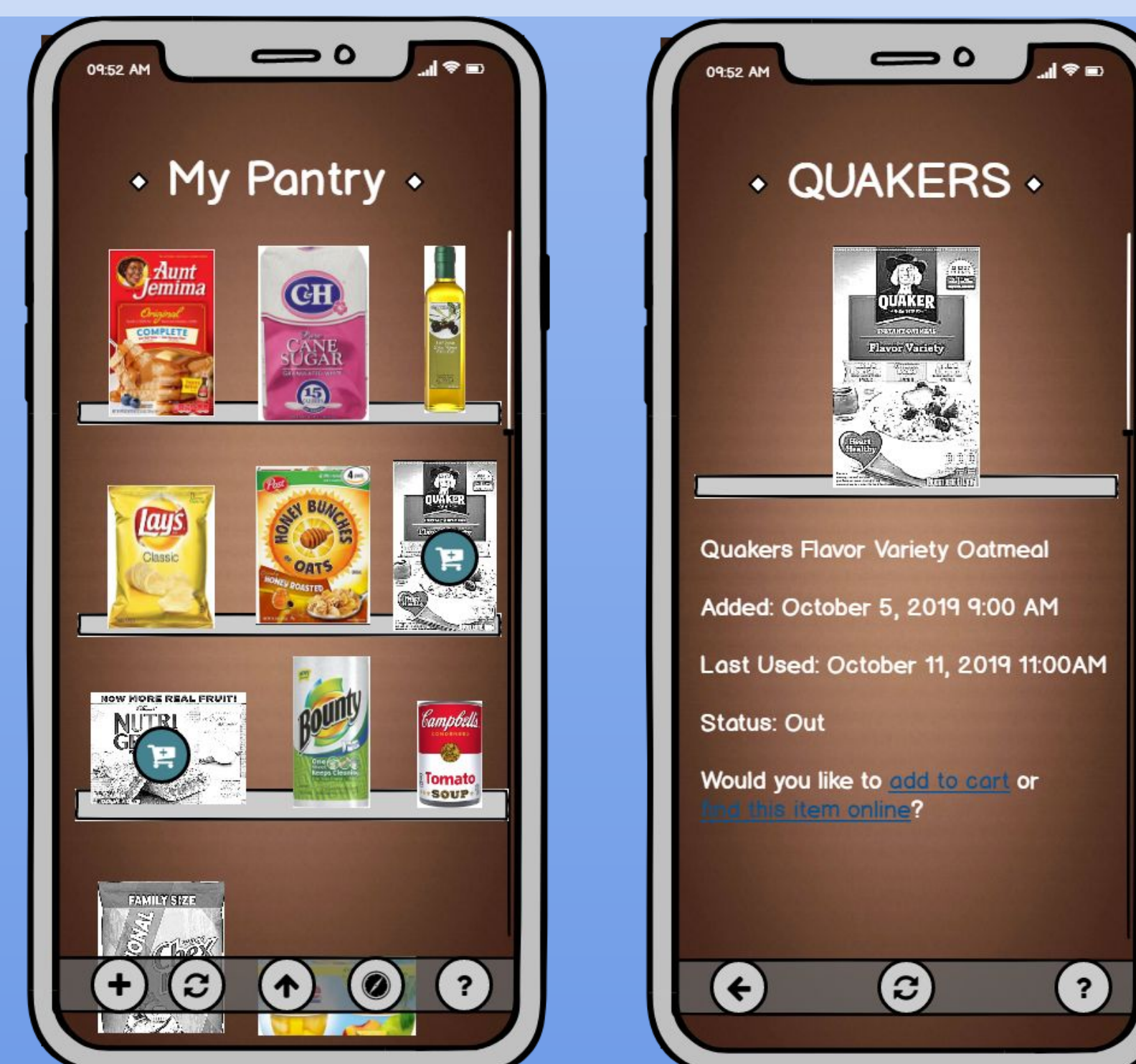
Timeline



Hardware Diagrams



Software Diagrams



Resources

- Raspberry Pi
- Laser Sensors
- Barcode Scanner
- App Development Toolkit (XCode, Android Studio)
- Plastic slim container

Milestones

- Finalize product design and specific materials to be used
- Build Hardware and run tests to get a working database for product detection
- Work on first draft of app and interface it with the hardware
- Finalize a working prototype by the end of the quarter

References

C. F. Hsu et al., "Smart Pantries for Homes," 2006 IEEE International Conference on Systems, Man and Cybernetics, Taipei, 2006, pp. 4276-4283.
doi: 10.1109/ICSMC.2006.384806
keywords: {home automation;smart pantries;replenishments delivery;pantry designs;Senior citizens;Costs;Cameras;Computer science;Radiofrequency identification;Robotics and automation;Consumer electronics;Tagging;Home appliances;Cybernetics},
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4274571&isnumber=4274438>