Capstone Design Project: Abstract and Info

Project Number: S19-12

Project Title: Smart Fridge

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**Abstract:** This project is targeted to provide a smarter bookkeeping method of the items in our fridge. The system will utilize a custom built device to be attached to the fridge which will scan items that go in and out from the fridge. The device will be a Raspberry Pi with a barcode reader that will continually scan for barcodes for the items going in. This device will act as check in system that will use UPC codes to retrieve information related to the item in question using a web scrape method. The item data will then be loaded to a server where users can check on what items are in their fridge using an Android app. The user can also adjust any errors in the items that are currently in the fridge. The app itself will be developed in android studio and have a login system where user specific information can be pulled from the database. This backend is built using Amazon AWS and GraphQL. The application will also have a simple grocery list management and also recipe suggestions based off the list of items currently in the fridge. Recipe suggestions will avoid pantry items and will look for recipes where items in the fridge are of the main focus. For the future, there is room for improvements such as natural language processing for items that do not have barcodes (i.e. produce).